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THE ARCHITECTURE OF THE NINETEENTH CENTURY.

THE Royal Institute of British Architects could hardly have hit upon a happier idea than that of enhancing the interest of the inauguration of their new galleries by means of an exhibition of the works of the Royal Gold Medallists. That this exhibition is not as complete as it might have been is easily accounted for when we consider the exceptional demands that the recent activities of the Institute have made on its workers and official staff. Nevertheless, sufficient has been gathered together to give a very fair impression of the course of architecture during the XIXth century, not only in England, but also in France and the United States. France is represented by

three buildings only (if we exclude the restoration of Pierrefonds by Viollet le Duc), but these three are of such outstanding value that many will consider the drawings of the Gare du Nord and the photographs of the Palais de Justice and the Opera House the most striking features of the whole exhibition. Hittorff's design for the railway-station belongs to a period when the modern school of French architecture was just beginning to develop. It shows the principles of logical design that have given such solidity to the architectural methods of France at a stage before the acquisition of that remarkable facility in the handling of detail which in later years became such a notable characteristic of the French school.

Joseph Louis Duc's Palais de Justice will perhaps make a stronger appeal to the English architect than Charles Garnier's Opera House; its restraint and severity, combined with the amazing mastery of architectural form that it displays, stamp Duc as one of the greatest artists of all time; one who can deliberately elect to limit himself to form so absolutely architectural, and yet express so fully all that architecture is capable of, deserves no less a place.

Garnier probably creates a more instant impression on the mind, but with Duc the longer we study his work the more we feel the force of his power of expression, guarded as it is from any taint of bravura or sensationalism. The two Americans, R. M. Hunt and C. F. McKim, are unfortunate in being placed in juxtaposition to two such masters. Hunt deserves recognition in that he was one of the first, if not the first, to introduce the ideals of the Beaux-Arts into America. We know what fruit the seed so planted has produced, but Hunt's own work naturally looks, where not purely imitative, somewhat crude and amateurish compared with that of the two great French masters. To a less extent the same may be said of McKim, though some of his designs—as, for example, the Rhode Island State House—display a high degree of taste and some imaginative power.

Coming to our own country, we find that the Gold Medallists fall into three main groups:—The Classicists of the earlier years of the last century; the Gothic Revivalists, who followed them; and the Modern school, who have adopted as their mode of expression the manner usually termed "Free Classic." We prefer to say nothing of the latter, into which falls the work of our living Gold Medallists, most of it being too recent to admit of its being fairly appraised in comparison with the work of the older men.

The Classicists are represented by C. R. Cockerell, whose drawings for the Taylor Building at Oxford, the Cambridge University Library, and St. George's Chapel, Regent-street (now destroyed), cannot fail to emphasise the impression that he was the greatest master of his art that England produced during the last century. Some way behind him comes Pennethorne, the architect of the Geological Museum, the west front of Somerset House, and the old London University Building (not shown). Less imaginative than Cockerell, he was, however, no less a master of proportion, massing, and scholarly detail. Sir Charles Barry leads easily all the men of his time in the comprehensive grasp of planning, both in matters of practical arrangement, and also on the broad basis of architectural composition; his massing and sense of proportion set an example to all of us, but in the treatment of detail and general distribution of light and shade he was not the equal of a number of his contemporaries. He was well advised when he secured the aid of Pugin on his design for the Houses of Parliament. Barry may be said to have founded a school of architecture as, apart from his two sons, the Wyatts and many other architects based their methods on his ideas. A large proportion of the street architecture of Australia belongs to this school.

Gothic is well represented in the exhibition, where we find drawings by G. E. Street (including the design for the Law Courts, which in no way approaches in merit the work as executed), Sir Gilbert Scott, J. L. Pearson, William Butterfield, Sir Arthur Blomfield, James Brooks, G. F. Bodley (whose church at Clumber deserves especial notice), and some vigorous water-colour drawings by Alfred Waterhouse, showing his design for the Law Courts, the Manchester Town Hall, and the Natural History Museum.

The more recent work includes designs by Mr. Ernest George, Mr. T. E. Collcutt, Sir Aston Webb, Mr. John Belcher, and Mr. T. E. Jackson; while we must not omit to mention the paintings lent by Sir L. Alma Tadema, which include a delightful little sketch of the interior of the Minster at Munster.

Taken as a whole the exhibition is full of interest to members of the architectural profession, and no one should omit to visit it during the fortnight that it will remain open.

NOTES.

The Royal Automobile Club. We give on our front page a view of the Royal Automobile Club now in course of construction, from the designs of Messrs. Mewes & Davis. Though perhaps less interesting in detail than the work previously carried out by these architects, we welcome this building as one setting a standard of scale and breadth of treatment too seldom seen in London street façades of recent years. Of course, the adjacent fine façades of Barry's club-houses will suffer somewhat from the larger treatment of the new club-house; but its long frontage would have added greatly to the architects' difficulties had they decided to maintain the existing scale of Pall Mall.

Memorials to King Edward. As readers of the daily Press are aware, a large number of proposals, many of them of a foolish or unsuitable character, have been made for the provision of a memorial to King Edward; but there appear to be not more than three or four that demand serious consideration. The proposal to erect the St. Paul's Bridge as a memorial to the King has already been dealt with, and all we need say is that, eminently desirable as it is to construct the bridge as soon as possible, giving full consideration to the views of the Royal Institute of British Architects, the scheme would not, in our opinion, form a suitable memorial, being essentially a city improvement, though a great one, and not really one which ought to be regarded as a memorial to our late King. Another scheme which has more to recommend it is the provision of a civic museum—on the lines of the Musée Carnavelet in Paris, which contains a most interesting collection of exhibits connected with the archæological history of the city, engravings and pictures, costumes, etc., and which would serve the same purpose in London. That such a museum should be provided we quite agree, and that it is to be provided we quite believe, for we understand that Mr. Harcourt, late First Commissioner of Works, has received from an anonymous donor a large sum of money for the purchase of objects for such a museum, which will be established in any case, even if not provided as a memorial for the late King. Perhaps such a museum could form part of an extension to the Guildhall, lending itself to a serious and proper architectural development of that building. In any case, the museum will come, but we do not consider there is much reason why an appeal should be made to the public to support it as a memorial to King Edward.

The Charing Cross Scheme. Another and really striking proposal, though not an original one apart from its specific application, is to deal with Charing Cross Railway-station and Hungerford Bridge—to put the station on the other side of the river and to construct a new bridge, which would command a fine view up and down the river, and be a great and undoubted improvement. Charing Cross is the centre of London, and a fine improvement, without doubt to be carried out sooner or later, could be made here. That it would cost a great deal of money is quite obvious, but the outlay would be justified, and should not prove an insurmountable obstacle, for, apart from the resulting improvement to property in the neighbourhood which would follow, a scheme of this kind would surely appeal to the imagination of the people and would do a great deal more to stimulate interest in the improvement of our city than any other proposal put forth. But, again, we feel that this also should be regarded as apart from the memorial; to our mind such a memorial should be distinctive in its character and not concerned with the fulfilment of an architectural or utilitarian purpose, however urgently needed.*

Paul's Cross. Paul's Cross, which has been erected in the precincts of St. Paul's Cathedral, is a notable addition to the outdoor monuments of London (see p. 571). The

* A proposal by Messrs. T. E. Collcutt and Stanley Hamp for dealing with Charing Cross and the bridge was illustrated and described in our issue for September 14, 1907.

work of Prof. Reginald Blomfield and Mr. Bertram Mackennal, it replaces the ancient preaching-place about which so many interesting facts and fancies have been chronicled, and both architect and sculptor have understood the requirements of tradition. It was the gift of the late H. C. Richards, K.C., who left 5,000*l.* for the purpose. Although its use as an outdoor pulpit will be limited to special occasions, it has been designed to serve the purpose which the old structure fulfilled.

The First Commissioner of Works.

CONSEQUENT upon the changes in the Cabinet, Mr. Lewis Harcourt has been promoted from his position of First Commissioner of Works to the office of Secretary of State for the Colonies, and Earl Beauchamp has been appointed to succeed him. It is impossible to say whether the change may be for the good of the department or not, and it is only fair to add that the promotion of Mr. Harcourt will mean something of a loss, for he was in many respects as good a First Commissioner as most who have preceded him; and Earl Beauchamp, though no doubt a man of culture and ability, has not shown any more special qualifications for the position than Mr. Harcourt, and he has yet to prove the possession of as good qualities as his predecessor had. It may be said that these appointment, which are political in character, matter very little, as the work of the department is carried out by an efficient staff of capable men; but we do not agree, for there is a special need for the appointment of a minister who shall possess some definite qualifications, who shall be known for an enlightened interest in art, architecture, and building, and who shall receive the respect of artists generally for his sympathy and support whenever possible of every well-considered scheme for the improvement and beautification of our cities.

An Architect's Painter.

SIR LAWRENCE ALMA TADEMA, O.M., R.A., has painted the portraits of three Presidents of the Royal Institute of British Architects:—John Whichcord, Alfred Waterhouse, R.A., and George Aitchison, R.A. The first and last pictures are hanging in the galleries at Conduit-street, with Sir W. Q. Orchardson's "Alfred Waterhouse." Sir Alma Tadema, an Hon. Associate of the Institute, is among the recipients of the Royal Gold Medal for the promotion of architecture, an honour only once before, in the case of Lord Leighton, bestowed on a painter. Sir Lawrence's great gifts for constructive architectural composition are, however, considerable, and it has been said that if choice or destiny had not made him an eminent painter, he might have been an equally eminent architect. Several of his pictures were to be seen at the Royal Institute of British Architects' Conversazione on Tuesday. Many distinguished artists, ancient and modern, have made architectural forms a feature of their pictures, but it would be difficult to name any painter who has so consistently treated architectural form as Alma Tadema, and particularly in its relation to the proportions of the human figure, a problem which has always had a singular fascination for him. These architectural qualities are shown particularly in such pictures as "The Coliseum," "Caracella," "Spring," "A Favourite Custom," and other works reproduced in the Christmas number of the *Art Journal*.

L.C.C. and Art.

THE Government of a country should certainly take an official interest in the work of the people, who are supposed to be governed in an enlightened manner, and we look forward with hope, after Mr. Evan Spicer's suggestion that the London County Council should spend 10,000*l.* a year on art, to the day when the State shall have the first refusal of everything produced for the æsthetic enjoyment of the masses. To control the expenditure the Minister of Fine Arts would have to be appointed at last, and on special points various Societies would have to be consulted. Mr. Spicer would form a Committee on which he would put any leading man who has been accustomed in a private way to purhcase objects of art and is an acknowledged artistic authority. There are difficulties in the way, but with proper enthusiasm they would vanish, and in time cities would have enough things of beauty to compete with the eyesores. Mr. Robert Colton, A.R.A., when he called the South Kensington Museum a white elephant, made similar proposals to bring art into touch with life.

The Institute Meeting.

THE opening meeting of the new session of the Royal Institute of British Architects was one of those interesting events which owe their success to several causes. The first feeling one had on entering the great gallery—to be used, presumably, as the new meeting-room—was of agreeable surprise that such an admirable improvement had been

Paul's Cross, St. Paul's Cathedral.

effected—the cramped and inconvenient old meeting-room, however endeared it might be by pleasant associations, giving place to a spacious and dignified gallery worthy to be the assembly-room of the representative Society of a great profession. The gallery in which the meeting took place and the adjoining east gallery are both admirably adapted for picture exhibitions, and they will no doubt be used for such purposes by the Institute and others, as they were on Monday, when the interesting collection of drawings by Past-Presidents was on view. The members are to be congratulated on their new premises, and Mr. H. T. Hare, the Hon. Secretary, for his part in so suitably adapting them to the purposes of the Institute. To quote Mr. Simpson in his speech at the meeting, "The Institute is in the sun, and it is for the members to keep it there."

Mr. Stokes's Address.

THE opening address of the seventy-sixth session of the Institute, printed on another page, was the kind of address one would have expected from Mr. Stokes. Full of good sense, especially in his observations on the proposed St. Paul's Bridge, it was not without reflections on the importance of architecture for its own sake and as a national asset—the value of the church or cathedral, often the principal thing in a town or city, as an object of interest or beauty. Mr. Stokes is likely to be a very popular President, and those members of the Institute who remember his successful presidency of the Architectural Association may well be satisfied that they have at their head a man of the ability and amiability of Mr. Stokes.

The Presentation to Mr. Simpson.

THE presentation at the meeting made to Mr. J. W. Simpson, the Secretary-General of the recent Town Planning Conference, was another event which gave interest to the occasion, and the presentation was as popular as it was well-deserved. The enthusiasm with which Mr. Simpson carried out a great deal of exacting and arduous work is known only to those who were associated with him, but the success of the Conference is known to everyone who attended the sittings, because it was so obvious and thorough. Mr. Simpson paid a graceful tribute to those who had co-operated with and assisted him, but to him is due the chief praise, and it was a proper and fitting recognition of his efforts on behalf of the Conference that his brother architects should, through their President, give testimony of their appreciation in the way they did.

ARCHITECTURAL EDUCATION AT HOME AND ABROAD.

BY ALFRED W. S. CROSS, M.A.

Part XIX.

THE Royal Academy of Architecture in France was organised in 1775, by letters patent which declared that henceforth it should be composed (1) of academicians who should be architects; (2) of honorary associates who should be non-professional; and (3) of correspondents or associates both native and foreign. As before, the academicians were divided into two classes, each class consisting of sixteen members. The honorary associates, also sixteen in number, were to be chosen from among persons who, although not architects, were distinguished by a knowledge of the art of architecture or of the allied arts, and the correspondents, twelve in number, were to be chosen from foreign artists and others who were neither resident in Paris nor within a radius of 50 miles from the capital.

A vast amount of valuable information relative to the work of the Academy in the XVIIIth century is to be found in the "Cours d'Architecture" of one of its professors of architecture, viz., J. F. Blondel, the distinguished author of "Monuments érigés en France à la gloire de Louis XV.," and of "Mémoires sur les Objets les plus Importants de l'Architecture," who records with pride the fact that in his day—viz., the latter part of the XVIIIth century—the principal architect in St. Petersburg, Berlin, Copenhagen, Munich, Stuttgart, Maunheim, Madrid, and Parma was of French nationality.

At this time the academicians, who were all styled *architects du roi*, numbered forty, and they appear to have had under their charge a similar number of students.

The Royal Academies of France were suppressed by a decree of the National Convention of August 8, 1793, but the Revolution merely had the effect of retarding the development of French supremacy in the arts and sciences, for many of the artistic and scientific institutions then abolished were subsequently re-established, and, in addition, the National Institute of Science and Art was founded by the Republic in 1795.

The objects of this Institute were of a twofold character—(1) To improve science and art by uninterrupted research, the publication of new discoveries, and correspondence with learned societies abroad; and (2) to follow, in conformity with the decrees of the Directoire, scientific and literary labours of general utility.

Composed of members resident in Paris or in different parts of France and a few foreign associates, the National Institute of Science and Art was divided into the following three classes, viz.: (1) Physical and Mechanical Science; (2) Moral and Political Science; and (3) Literature and the Fine Arts.

The Legislature granted an annual sum of money for the maintenance of the Institute to which the Collège Mazarin was assigned, and twenty-four students were chosen annually, by competition, to travel for a term of years at the cost of the Republic.

In addition, students selected by the Institute were sent to Rome and lodged and boarded there for five years.

These selections were made every year from the three sections of painting, sculpture, and architecture comprised in the third division of the Institute (Literature and the Fine Arts).

Immediately after the suppression of the Academy of Architecture during "the reign of terror" individual efforts were made to keep alive the national architectural traditions, and this was successfully accomplished by the establishment of a school or studio of a semi-private nature, conducted by David Leroy, A. L. T. Vandoyer, and L. P. Baltard.

A proposal subsequently made by Vandoyer for the establishment of a National School of Architecture and submitted by him to the Government was based upon the division of architectural tuition under six heads, viz:—

(1) Elementary—Comparison of buildings one with another, with regard to the principles of composition. The application of these principles to designs prepared by the students.

(2) The architecture of different peoples historically considered, including an inquiry into the beauty and proportions of antique monuments, the study of ancient authors and *grande* composition.

(3) Construction—including the study of the methods of construction employed by different nations—of that peculiar to the ancients and the comparison of their methods and materials with our own. Experiments from nature and demonstration upon the monuments themselves.

(4) Perspective and the development of the proportions of monuments of architecture from different points of view.

(5) Mathematics—including their application to the art of building—trigonometrical plans, etc.

(6) Stereotomy.

Ultimately recognising the necessity of providing some central institution in which architecture could be taught, the Government set apart certain rooms for the instruction of students of architecture in the Collège Mazarin, where, at that time, the competitions for the *grand prix de Rome* were usually held, and where the meetings of the National Institute also took place.

And the Ecole des Beaux Arts may, therefore, be said to date its existence from the commencement of the XIXth century, when it was under the control of the National Institute.

Later, when in 1816 the Royal Academies were restored by Louis XVIII. and grouped under the same comprehensive head of "National Institute," a site was found for the future School of Fine Arts on land then partially covered by a mediæval convent, which also contained the celebrated Museum of French Monuments, collected by Alexandre Lenoir at the time of the Revolution, and by him preserved to the nation.

By the King's command these monuments were returned to the churches and other buildings from which they had been taken, and the convent in which the monuments had been housed by Lenoir were appropriated to the Ecole Royale et Spéciale des Beaux Arts.

It was soon found necessary to erect new buildings, and François Debret was instructed to prepare the designs for the school.

The first stone was laid on May 3, 1820, and in 1834, when the buildings were still unfinished, the architect, Debret, was replaced by his brother-in-law and pupil, Felix Duban, who remodelled the whole scheme, which indeed at that time had not advanced very far.

By an ordinance of Louis XVIII., dated August 4, 1819, the new school was entrusted to the charge of professors forming a "general assembly," whose decisions, on all questions affecting the work of the school, were carried into effect by the administrative council, consisting of a President, a Vice-President, the permanent Secretary, and one of the professors in the section of architecture.

Thus, although the school was a State institution, the responsible Minister of the Crown had no control over its management, which was entirely vested in the hands of the "general assembly." In such circumstances the influence of the Academy was extremely far-reaching and powerful—paramount indeed to that of the State.

In 1864 the school was virtually separated from the Academy of the Fine Arts by Napoleon III., who re-organised it as an independent institution under the immediate control of the State, and answerable to the Government for its acts.

The administration of the school was placed under the charge of a director to be nominated for five years, a secretary, an accountant, a keeper, and a librarian, in addition to the educational staff, consisting of the professors at the head of the different studios. In accordance with the Imperial decree, a Council was constituted consisting of the Director of the Administration of the Fine Arts, two painters, two sculptors, two architects, one engraver, and five other members, all of whom were appointed by the Minister of State.

The adjudication of the designs submitted for the *grands prix de Rome* was then taken out of the hands of the Academy and delegated to juries appointed by the schools, and the regulations governing the competitions clearly defined.

Programmes of the two preliminary trials and of the final competition were set by the Council of the School, and the designs submitted by the students in each of the three stages were adjudicated upon by a jury composed of nine members for each of the three principal sections, viz., painting, sculpture and architecture, five members for the section of plate engraving, and five for the section of engraving on metals and gems.

It was then also determined that the students in architecture, painting, and sculpture sent to Rome should be pensioned for four instead of five years.

But, whilst their residence at the Academy of France and Rome was made obligatory for two years, it was determined that the remaining two years might be spent by the students in travelling or otherwise according to their inclination, provided they gave due notice of their intentions in this respect.

The engravers received pensions for three years only, during which they were required to be in residence at the Villa Medicis for at least two years, and the Director of the Academy of France at Rome was required to furnish a half-yearly report to the Minister of State on the work done there by the students in residence.

Eleven studios, or *ateliers*, were then established in connexion with the school, over each of which a professor was placed in charge as *chef d'atelier*.

Three studios for painting, three for architecture, three for sculpture, one for plate engraving, and one for gem engraving were thus organised.

No further alteration in principle has since been made in this School of Fine Arts, although numerous modifications in points of detail have been effected from time to time, both in its internal administration and in its curricula of studies.

THE POST-IMPRESSIONISTS AT THE GRAFTON GALLERIES.

"*Pauvre Manet, que diable fais tu dans cette galère?*" one feels almost inclined to exclaim after an impressionistic view of this extremely impressionistic exhibition. A good deal of water has run into the sea since Manet's day; it is difficult to realise now that an artist who worked so earnestly in the manner of the best traditions of great painting should have been considered a revolutionary in his time. His art, indeed, would seem to have aged a little (take, for example, his scene at the Bar of the Folies Bergère), but his great distinction is of permanent interest. We are not sure that, apart from the selection of his own pictures, the present exhibition is at all a tribute to his memory. But he may be associated with the present group of painters in so far that his life was an earnest struggle against an arbitrary Academic control. But these painters go much further; they defy tradition, which is quite another matter, and with which it is absurd at this time of day to associate Manet's name.

Most of these artists—Cézanne, Gauguin, Jules Flandrin, Vincent van Gogh, Maurice Denis, Henri Matisse, Seurat and Signac (we take the names indiscriminately)—are well known to students of modern French painting, and even the wildest of them have a certain following. In England the majority of these names possess little or no significance, and the present exhibition is scarcely likely to secure for them much appreciation. By the majority of spectators they will be dismissed with ridicule. This will, however, be a little disrespectful to artists who have pursued or are pursuing their ideas conscientiously and often at some sacrifice. We confess to be out of sympathy with much of their work and inclined to look upon certain aspects of it as pedantic and absurd. But, on the whole, these men and their kind have broadened the basis of the art of painting. With their theories we have little concern. When a theory becomes the dominant factor in the understanding of a work of art we begin to have some misgivings as to the work of art. If the result is not sufficiently explanatory, it fails. Manet, Whistler, Monet—what do we care about their theories with their paintings before us? We do not need any adumbration of abstract principles to appreciate their pictures. We are too content to discover in them a fresh understanding and a fresh joy. With the most open mind in the world, we doubt that the *éginétiques*, M. Matisse and his followers, at the present exhibition, will ever do more than arouse the interest of curiosity. We are not sure that the theories themselves will stand very close examination; certainly we should not care to formulate a series of æsthetic principles from the introduction to the catalogue (glad as we are to have it before us); we find them as disconcerting as the pictures. Frankly, we should imagine that the aim of the promoters of the present exhibition is, apart from the work of Manet and one or two others, to administer a tonic to the British public. And certainly in this manifestation of the artistic spirit, in which there is expressed so much egotism in nervous and pedantic opposition, not only to Academic and popular sentiment, but to the spirit of tradition itself, there is much that is refreshing.

These representations of Nature, speaking generally, do not represent to us Nature. This is not the way, at least, in which trees and cornfields and clouds and the general form of landscapes appeal to a man in the street, not with the best will in the world. Nor do these pictures, the wildest of them, those of the Matisse *genre*, seem to us to possess any distinctive decorative quality. They are all too crude, too infantile. And here we come to one of our theories. In the catalogue we read, "Like the work of the primitive artist, the pictures children draw are often extraordinarily expressive." It were foolish to dispute this obvious point, but we fail to see its application in the consideration of the psychological basis of art; for it is further said that "the art of children consists not so much in an attempt to represent what the eye perceives, as to put a line round a mental conception of the object." A perfect quagmire of premises, you perceive, from which is drawn, to our thinking, a most fallacious inference. The work, of course, of many of the artists is outside this category. The "Orphée" of Maurice Denis, for instance, probably his best work so far, which is charming either as design or as a poetic evocation. The pictures grouped in the apse of the Large Gallery, the Seurats, the Signacs, as well as the Vincent van Googhs on an adjacent wall, are just as delightful in oil as they might be if worked in mosaic, which would seem indeed to be the happier medium for their particular colour theory. Two pictures by Picasso illustrates the influence of a theory. In the Large Gallery there is his "Nude girl with a basket of flowers," a fine thing, almost an exquisite thing, in which there is expressed a spirit of something approaching classic detachment; in the next gallery there is his portrait of "M. Saget," worked out in some geometrical theory, we forget whether it is a cube or a triangle—the theory is there, the detachment is there—but the portrait!

Nevertheless, there are many fine things at this exhibition, but *Manet, que diable fais tu dans cette galère!*

PRESCOT SEWAGE DISPOSAL.—Mr. R. G. Hetherington, A.M.Inst.C.E., held a Local Government Board inquiry on October 26 at Prescot into an application of the Urban District Council to borrow 2,300*l.* for additional expenditure on their sewage and sewage disposal works. Mr. Harry W. Taylor, A.M.Inst.C.E. (of Messrs. Taylor, Wallin, & Taylor, Newcastle-on-Tyne and Birmingham), is the engineer for the work, and explained the details fully

R.I.B.A. OPENING MEETING.

THE opening meeting of the 76th Session of the Royal Institute of British Architects was held on Monday, at No. 9, Conduit-street, Regent-street, W., Mr. Leonard Stokes, President, in the chair, supported by a number of the leading architects of the day. It was the first meeting of the Institute held in the new galleries, and the improvement upon the old meeting-room was generally commented on.

The King as Patron of the Institute.

The minutes of the last meeting were taken as read, and the Secretary, Mr. MacAlister, read the following letter:—

DEAR SIR,—I am commanded by the King to inform you that His Majesty is graciously pleased to become patron of the Royal Institute of British Architects, and that His Majesty will continue to present to your Institute the Royal Gold Medal for Architecture. Yours faithfully,

(Signed) W. CARRINGTON,
Keeper of His Majesty's Privy Purse.
The Secretary,
Royal Institute of British Architects.

New Honorary Members.

The Secretary also read the following list of nominations of hon. members, *i.e.*:—

As Hon. Fellows.

The Right Hon. Arthur J. Balfour, P.C., M.P., Whittinghame, Prestonkirk, N.B.
The Right Hon. John Burns, M.P., President of the Local Government Board, 37, Lavender-gardens, Battersea, S.W.
The Right Hon. Lewis Harcourt, P.C., M.P., 14, Berkeley-square, W.
Field-Marshal Viscount Kitchener of Khartoum, G.C.B., O.M., G.C.M.G., Alderbrook, Cranleigh, Guildford, Surrey
The Right Hon. the Earl of Plymouth, P.C., 54, Mount-street, W.
The Right Hon. the Lord-Redesdale of Redesdale, G.C.V.O., K.C.B., Batsford Park, Moreton-in-Marsh, Gloucester.

Hon. Corresponding Member.

Daniel Hudson Burnham, M.A., Ph.D., LL.D., Chairman of the American Commission of Fine Arts, Chicago, U.S.A.

As Hon. Associates.

David George Hogarth, 20, St. Giles, Oxford.
William Hesketh Lever, The Hill, Hampstead Heath, and Thornton Manor, Thornton Hough, Cheshire.
John Seymour Lucas, R.A., New Place, Woodchurch-road, N.W.
W. M. Flinders Petrie.
John Singer Sargent, R.A., 31, Tite-street, Chelsea, S.W.
Marion Harry Spielmann, F.S.A.
William Hamo Thornycroft, R.A., 2a, Milbury-road, Kensington, W.
Lawrence Weaver, 14, Northwich-terrace, St. John's Wood-road, N.W.

The Town Planning Conference.

The President said it was his pleasant duty to remind them of the recent Town Planning Conference. It was largely in consequence of the support the Institute had received from the Royal Academy and the Corporation of the City of London and others that they had been able to hold such a successful Conference. Letters of thanks had been formally sent by the President and Council to the Royal Academy and the City Corporation, and those who had helped in making the Conference the success it had been, but he thought they would like to show their appreciation of the kindness of the Academy in lending their galleries, and the Lord Mayor and the Corporation of the City of London

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for the use of the Guildhall and the Mansion House.

The President's remarks were received with loud applause.

The President said that in regard to their own particular part of the work, they had to thank the Executive Committee, with the indefatigable Chairman, Sir Aston Webb, at its head. An immense amount of work was done by that Committee, and they owed the whole Committee their thanks, and particularly two of its members, and he was sure the Committee would agree with him when he singled them out. The first name was that of Mr. Raymond Unwin, on whose shoulders fell almost the entire work of getting up the magnificent exhibition at Burlington House, and they must remember that at the time he did this work he was not a member of the Institute. Mr. Unwin took all the trouble he did for a good cause without being officially connected with them, but he was glad to say that the Council had elected him that day as a Fellow in recognition of the great services he had rendered to the cause of town planning, and secondly to the Institute, for it was no small thing for the Institute to have organised such a fine exhibition.

Presentation to Mr. J. W. Simpson.

The second name he had to mention in connexion with the Conference was that of Mr. J. W. Simpson, the Secretary General. Their applause showed the general appreciation of Mr. Simpson's work, and it was hardly necessary for him (the President) to expatiate upon it. Mr. Simpson was a born organiser, and thanks to that the work of the Conference went on without a hitch. It had occurred to the Council that the members would like to give Mr. Simpson something more tangible than applause, and so they had bought him an old Sheffield plate inkstand—they did not ask him to regard their appreciation by the value of the inkstand—and on it they had had inscribed: "John W. Simpson, from the members of the Royal Institute of British Architects in appreciation of his services in connexion with the Town Planning Conference of 1910." The President concluded by asking Mr. Simpson to accept the gift as a token of appreciation and esteem.

Mr. Simpson,

who, in reply, was received with loud applause, said he was very grateful to the President for all the kind remarks he had made, and for the endorsement of them by those present. It was, he thought, the first time that the Institute as a whole had made such a presentation to one of its members, and he was proud to think that they had thought him worthy to receive it. But his pride was tempered by the fact that he was but the figure-head of a band of workers over whom he had the honour to preside, and he desired to thank the members, on behalf of himself and his fellow-workers, for their splendid gift. The present was an occasion for him to say publicly how much he owed to the President and to Sir Aston Webb (Chairman of the Executive Committee) for the unquestioning confidence which they had placed in him. And there were many others—Mr. Unwin, whose work, appreciated by all, they all knew, and Mr. H. V. Lanchester, the Secretary of the Executive Committee, and Secretary of the Papers Committee, who had done an enormous amount of work before he (the speaker) had been appointed, and an amount of work which had perhaps been hardly understood by those who merely saw the end of it. Then there was Sir Brumwell Thomas, to whose patient care was due the credit of organising the visits; and Mr. Henry Tanner and Mr. F. D. Clapham, who acted as brigadier-generals in charge. Those were but a few of the names which time permitted him to mention, but he could not pass on without a special reference to the devoted and unselfish work of the staff of the Institute, with whom it was a pleasure to be associated. As to the Conference, it had been their good fortune that it should have been a success, and he thought the Institute had benefited by being brought more prominently into public notice; it had been given a place in the sun, and it was for the general body of members to keep it there. He thought that they had been able to show the public that the finest town planning had been done by architects, and the architects of the country should profit by the message which had been given to the public.

Mr. Leonard Stokes, P.R.I.B.A.

The President's Address.

The President then delivered the following address:—

"Although I have for some time past been acting as your President, this is the first opportunity I have had—and I hasten to avail myself of it—to thank you all for the honour you have done me in electing me as your President. I need hardly say that I much appreciate the honour, though I could perhaps have wished for a somewhat less strenuous term of office, for although this is but the opening meeting of the session, the Institute has already held a great Town Planning Conference. I know you will be glad to hear that this was an unqualified success, thanks to Royal patronage and largely to the great help received from the Royal Academy and the City Corporation. But, if I may say so, this Institute deserves some credit for having had the boldness to take the matter up and the ability to carry it through so successfully. I think, too, we have shown the world at large pretty thoroughly the substantial interest we take in the subject of town planning, and our capacity to deal with problems of this nature in a large and public-spirited manner.

Having had such a successful Conference, however, it would be folly to let the matter drop, and it is proposed to hold shortly a much smaller gathering, composed entirely of experts, with a view to seeing if some definite proposals on the subject cannot be drafted, for the help of those either actively engaged in carrying out works of this nature, or in preparing schemes under the Act. Some conclusions of this sort would be most helpful, and as we have taken the lead we must not fall behind and let the subject get possibly into wrong hands.

The Greatness of Architecture.

Mr. Burns, who did so much for us as Hon. President, in one of his invigorating speeches during the Conference, advised architects to come down off their pedestals and mix with their fellow creatures and their projects. What I think he probably meant, if I may say so, was that we architects should come out of our shells rather than off our pedestals, and this is undoubtedly sound advice, for do we not represent the art which of all others has done the most for mankind, both as regards providing things of great utility and objects of the greatest beauty? Has not history, too, been more clearly written in the architecture of past ages than in any other medium? If so, there is no particular reason—apart from our natural modesty—why we should hang down our heads when forced to admit that we are architects; we should rather glory in the fact, for have we not, for that very reason, much to be proud of, and but little to regret? Anyone who has travelled knows that the extraordinarily beautiful and impressive tombs and temples on the Upper Nile are not things to be ashamed of;

and are they not works of architecture produced by men? And let anyone who wants to scoff at us go to Greece, and then tell us what he thinks of what he has seen there. The sculpture is certainly wonderful, but I assert, without much fear of contradiction, that it is architecture, which stands out pre-eminently, in this great home of art.

In our own country, too, is not the case very much the same? What is most calculated to raise the mind, cultivate the taste, and generally inspire us with a love for the beautiful in almost every village we go into? Is it not the parish church? And if we choose a town and not a village, is it not again the cathedral which dominates the whole, asserting with solemn dignity that architecture has but few rivals and certainly no equal? I do not for one moment wish to imply that good architecture is only to be found in our churches and cathedrals. I only wish to make it clear that there, at any rate, we, in a most thrilling way, see proclaimed the greatness of our calling.

To take this great city alone, is it not architecture which makes it so interesting, though somewhat bewildering? And may I ask, without any disrespect to other arts, whether the intelligent stranger is most impressed by the works of the English painter, the English sculptor, or the English architect to be found within its walls? I daresay we might have had even more fine buildings had the national temperament been given rather more to display and less to money-making, but, at any rate, we have a unique collection in our City churches with St. Paul's Cathedral at its head. Wren, too, made a plan for rebuilding London after the fire, a plan which everyone now regrets was not carried out, and yet if the same opportunity were to come again to-morrow, I daresay those in high places would make the same mistake their forefathers made, and in spite, too, of all they have recently heard on town planning.

St. Paul's Bridge.

In fact, within the last few days the City Fathers have decided to build a new bridge across the Thames under the very shadow of St. Paul's, and yet in preparing their scheme architectural effect in dignified arrangement is the one matter that is left to take care of itself, and not only that, but when a deputation from this Institute waited upon the Bridge House Estates Committee, which had the matter in hand, and besought them to take advice on this particular point, it was disregarded and misunderstood, and the world has been told that it would cost a million more to carry out the scheme proposed by the deputation. Now I wish to repeat what I have already said in the public Press, that all the deputation did was to urge upon the committee the importance of considering St. Paul's Cathedral, when selecting the position of the bridge, and the arrangement of its approaches, and the necessity of obtaining the best possible advice on this point from the first. That was the *scheme* proposed by the deputation, and one would have thought that as business men they could have seen the wisdom of getting the very best possible advice before embarking on a project costing nearly two millions of money. There are many ways of doing most things, and probably more than one of laying out this bridge, and what we fear is that the Corporation has not yet hit upon the best way. I see in the Press that designs for the bridge are to be advertised for, but what should be done is to advertise for a scheme, rather than a bridge, if any advertising is necessary, but the right thing to do, I maintain, is for the Corporation to appoint the best architect it can find—for there are architects and architects, I fear, just as there are golfers and golfers—to work with the Engineer and the Surveyor they have already appointed, and for these gentlemen to re-consider the lay-out of the bridge and its approaches, and have proper models made, so that this magnificent opportunity of making a really great national improvement may not be thrown away. A glance at the plan approved by the Corporation will explain my meaning, for on this the position of St. Paul's Cathedral is not even indicated. If something of this sort is not done then the only course I can see is for us to raise as much public interest and influence as we possibly can, and oppose the Bill in Parliament, when the Corporation seeks the necessary powers to erect the bridge. Your Council has, however, decided to petition the Corporation [Mr. MacAlister then read the terms of the petition, which urged the advisability of obtaining architectural advice upon the whole proposal, which involved artistic considerations of great importance.] and I hope even yet we may be successful.

Of course, if it is decided to ignore architecture altogether in the bridge and adopt a design entirely of an engineering character, and another Benjamin Baker can be found. I can imagine a steel bridge of a single span which might look very fine, but even then the approaches must be properly arranged and designed by an architectural mind, as I take it that these cannot very well be of steel in any case.

The Designing of Waterloo and London Bridges.

While on the subject of bridges and their approaches, it may be interesting to inquire into the designing of some of our best examples, viz., Waterloo and London Bridges, and my friend, Mr. A. E. Richardson, has kindly supplied me with the following information which he has collected for a book he is writing, entitled 'Monumental Architecture in Great Britain.' Waterloo Bridge, which was at first called the Strand Bridge, was designed by Ralph Dodd, an engineer who had, however, *made a particular study of architecture*, and an Act of Parliament was obtained in 1809 for its erection on Dodd's design. Before the bridge was begun, however, Dodd was deposed, and John Rennie, another engineer, who, however, does not appear to have had any particular knowledge of the subject—having begun life as a millwright—was employed to carry out the work, and the following extract from the *Gentleman's Magazine*, page 482, vol. 87, 1817, the year the bridge was finished, is, I think, conclusive:—

'Mr. Ralph Dodd requests us for the sake of justice to contradict an assertion which has got abroad, viz., that Mr. Rennie was the architect of the Strand or Waterloo Bridge, which he says "is not the fact, it being an honour that I cannot allow to be taken from the family. The plan and design of that bridge were approved by the proprietors, and its measurements inserted in the Act of Parliament for building it (of course, no other could be admitted) long before Mr. Rennie had anything to do with it. These plans are now accessible for the inspection of any gentleman who may wish to see if they have been acted upon, and in which it is presumed the architectural taste of this country has not been disgraced."'

The cost of the bridge was 565,000*l.*, the approaches 112,000*l.*, land and buildings 373,000*l.*; total 1,050,000*l.*; and it took six years to build. We may, therefore, take it that the designer of the bridge was Ralph Dodd, an engineer who had made a special study of architecture, and was naturally and very justly proud of its architectural effect.

It is suggested that Dodd in designing Waterloo Bridge may have gone to old Blackfriars Bridge for his *motif*. This bridge was the work of Robert Mylne, and was designed by him on his return from Rome, where he had been *studying architecture*, and was somewhat similar in design to the present Waterloo Bridge, as may be seen from the old drawings of the bridge hanging on the walls.

We now turn to London Bridge, the design for which was undoubtedly produced by John Rennie—the work being carried out by his son, Sir John Rennie. Having been connected with the erection of a fine work like Waterloo Bridge, it seems only natural that Rennie should have made a good design for London Bridge, and we are grateful to him for having done so, but it is interesting to note that the younger Rennie was Professor Cockerell's brother-in-law, with whom I believe he travelled a good deal, and that Cockerell must in all human probability have had some influence on Rennie when he was designing the details of the bridge. We know, at any rate, that Professor Cockerell made designs for the buildings connecting with the approaches to the bridge, and that these were considered by the committee, but rejected, and the work was eventually put in the hands of Sir Robert Smirke. Rennie regretted very bitterly the non-adoption of Cockerell's designs, and could never bring himself to admire those erected by his other friend Smirke.

I think I have now said enough to show pretty clearly that the designers of our best bridges, even if they were not architects by name, were so by training, at any rate, and good architecture, whatever may be said about it, cannot be produced except by a trained mind.

The Architecture of To-day.

But I have wandered somewhat from my point, which is that architecture is an all-important matter. I, however, fancy some people may say, 'That is all very true of the past, but architecture is not what it used to be.' Well, I deny that. The best architecture in England of recent years is just as good on the whole as it ever was, though conditions are much more difficult and great opportunities not so often to be met with. If evidence is wanted to prove this statement look round the walls to-night, and you will see representative work of some of our Architect Royal Gold Medallists—as far as we have been able to collect and exhibit them—since the medal was first presented in 1848 to Professor Cockerell. The names of such great men as Cockerell, Barry, Donaldson, Tite, Owen Jones, Scott, Street, Butterfield, and Bodley, not to mention living men, are enough alone to prove my case without looking at the work here shown—though I advise you nevertheless carefully to examine it—and also please remember that there is at least one other name equally great, which, for some reason or another—but I think not through any real fault of this Institute—does not appear in the list of recipients of this Royal recognition of our calling.

It may be said that these gentlemen are exceptions. Of course they are to some extent, but there are many others who approach very nearly to them in the quality of their work and in their power of design. And I think to-day we have even more good men than ever, particularly amongst the younger generation, their training now being so much more systematic than it used to be, and we hope to make it even more so in the future, as the various Architectural Schools about the country are all doing such good work. There is, however, a general feeling amongst thinking men. I fancy, that we do not take our students far enough along the road of proficiency. They are very well grounded in many cases, but their studies, under direction, are cut too short, and they are left to shift for themselves just when direction would be most useful, and a helping hand of the greatest assistance. If I may say so, it seems to me that the Royal Academy is the right body to undertake this higher educational work; at any rate, in London, and if it would establish a school somewhat on the model of the École des Beaux Arts in Paris, then I am sure we as a body would be most grateful. There are plenty of schools where the smaller architectural subjects are taught, but larger projects are not often dealt with, and the Academy might well take them up, and if town planning is to become a living thing amongst us the design and arrangement

on dignified lines of streets, bridges, squares, and other open spaces must be systematically taught to our students.

A large sum of money has recently been left by the late Mr. Henry Jarvis to this Institute, to be spent either on new premises or on studentships and prizes, so that, fortunately, we are just now in a position to offer encouragement to this kind of study should we deem it desirable, as no doubt we shall.

The Improved Premises.

As this is the first meeting held under what is now practically our own roof since our foundation in 1837, I think we may congratulate ourselves on the event and our Hon. Secretary and Architect upon the success of his efforts in adapting these galleries to our use. Those of us who knew them as they used to be can hardly recognise this fine suite of rooms we are now in, which will give us the space to develop in that we have badly wanted for years past. Whilst on this subject I should like to give you a rough outline of our present position with regard to these premises. We are, then, as I have said, practically the freeholders of the whole of 9, Conduit-street, including these galleries, as we hold them on a perpetual lease from the Corporation of London, and we have not only turned a short lease of 9, Conduit-street into a perpetual one and added something like 112 per cent. to our accommodation by acquiring and adapting these galleries, but have only added 88 per cent. to our old expenditure in so doing. We may be shoemakers' children, but in this case I think we have managed to get pretty well shod.

It is proposed to hold exhibitions, etc., from time to time in these galleries, and I think we shall find them of use in many ways; but, if at times we have no particular need for them, there must be numbers of societies who would gladly rent them from us for exhibitions or meetings. There is a separate entrance from Maddox-street, and the letting-off of two of the galleries under the name of the Maddox-street Galleries would be an easy matter, and it could be done without interfering in any way with the ordinary work of this Institute, and two or three hundred a year, say, might thus be added easily to our income.

The Licentiate Class.

I now want to remind you of another subject that has been actively engaging the attention of most of us for years, and which resulted last year in our acquiring another Supplemental Charter and new by-laws. Under these a new class of members has been established in this Institute, for it was felt that we should be the unmistakably representative body in the profession. These new members are called Licentiates, and we hope to enrol practically all *bona fide* practising architects who are not already members in this class. You are aware that there are a large number of men about the country who, for one reason or another, never presented themselves for our examinations or became either Associates or Fellows. Many of them are now in active practice, and we can hardly now ask them to subject themselves to examination; the only thing that we ask of them is, therefore, that they shall be thirty years of age, have either been in practice for five years, or shall have been engaged in the study or practice of architecture for ten years. This class is to be a temporary one, open for twelve months only, and I am glad to say many hundreds have already joined, though only six months out of the twelve have yet elapsed. When once within our ranks Licentiates can either remain in that class or can pass on to the Fellowship, when qualified, and after passing such examinations as may be established. Such examinations may possibly largely take the form of an inquiry into the quality of the candidate's executed work, or may even take the form of the special examination for the Associateship, the Board of Education having power to exempt a candidate from such subjects as his executed works may show him to be proficient in.

I do not want to weary you with this subject, but I do think it most desirable that as many members as possible should join our ranks, for, firstly, I think we are well worth joining; and, secondly, when we have a large roll of members we shall be much more influential, and can then apply to Parliament for such form of recognition as we think most desirable. I cannot say that I am a great believer in Acts of Parliament, but others, perhaps, are, and when we are a united profession, we shall at any rate be in a better position to decide what it is we really do want, if anything, beyond being qualified members of the one Society, which is recognised by all as truly representing architecture in this country.

The New Copyright Bill.

Whilst on the subject of Acts of Parliament I should like to call your attention to the new Copyright Bill which it is proposed to introduce this autumn, largely, I believe, to meet the wishes of painters and sculptors, who, I think, are reasonably dealt with in the Bill. Architects, however, come off very badly, for any little right we may now have in our designs is to be taken from us ruthlessly and vested in the building owner. If anyone copies a piece of sculpture the copy can, under the Bill, be destroyed by the original designer. But an architect having once designed a building has no further right in his design whatever. The building owner however, can, apparently, repeat the design up and down the street, or he can sell it to the promoters of another estate to repeat *ad nauseam* all over the place, and the architect is powerless. This hardly sounds like common justice, but it may be. Again, if I design a chimney-piece and put it in the best bedroom of a house for A, I can never use that chimney-piece for B without laying myself open to prosecution by A. This seems a little hard, as we all know there are numbers of small fittings, like door furniture, bell pushes, and grates, that, having once designed, an architect likes to feel he can use again and again if he so desires. The new Bill, however, will stop all this, unless we can get it altered, or hit upon some way of 'contracting out' of it. At present we are only liable to be copied by those who have a sneaking admiration for us. In future, if the Bill becomes law, we shall not be allowed to put up even colourable imitations of our own work. This will come very hard on some of us, I fear!

The Memorial to King Edward.

You will be glad to hear—if you have not already heard—that the Lord Mayor, when asked to form a Committee to organise a memorial for London to the memory of Edward VII., at once wrote to me as your President, and asked me to serve on that Committee, and, feeling that you would like to be represented, I accepted the invitation on your behalf, and since then my name has been added to the Executive Committee. I feel, of course, the responsibility of the position, but will do my best to represent architecture in response to the compliment paid to this Institute. The problem of selecting a suitable form for the memorial is not an easy one to solve, but, besides being architects, we were his loyal and loving subjects, and I know you would all wish a suitable memorial to be erected in London to our late King and Patron's memory.

In conclusion, I will only add that we architects are obviously somewhat powerless, unless those who have the control of public and other works will come to us to help them. At present the fashion is all for buying old masters and preserving old buildings, very little encouragement being given to those who have to provide old masterpieces for future generations. Large Government and Municipal Departments do not sound like places where art is likely to thrive or flourish, and yet most of our principal public works now first see the light in these uncongenial hotbeds of sealing-wax and red tape. And when our governing bodies do not encourage and appreciate the beautiful how can we expect the public to understand that it is possible to transform even commonplace projects into works of real grace and beauty? Ornament and elaboration are quite unnecessary, but thought, study, and skill are indispensable. With these, however, the most ordinary and everyday undertakings have been in the past, and can again in the future be, transformed by proper architectural treatment into things of real beauty, a pleasure to see, a pleasure to live with, and a lasting benefit not only to us but also to our children and their children's children."

Sir G. Reid,

in proposing a vote of thanks, said there was certainly one good thing about the Royal Institute of British Architects—it had not only a grand name but it had a grievance—about the proposed new bridge. It was a grand thing to have a grievance, and he thought the grievance was a sound one. He spoke with the greatest diffidence on matters connected with architecture, but he had not been able to walk about London for the last five or six months without wondering how London got built at all in the way it was built. There was not much trace of a plan about London; there were several grand things about it, but unfortunately they were several hundred years old. He was told that things moved slowly here—that it had taken the Institute over seventy years to get the little home of their own which they were delighting in that night. He was glad they were becoming progressive. His regret was not so much that the great men of the profession did not get a chance to do great work—though many of them did not—but that there were so many others who never had a chance of showing their powers. One of the best things in the President's address was the evidence it gave of the thought given by those who had succeeded in the profession to those who were developing their tastes and abilities, and it was a fine thing to bring opportunities for developing the talent of the profession more and more within reach of the majority. In Australia there were a number of splendid artists, but they had a different climate from that of the old country and they had different architecture, and those architects had a grand inheritance in the genius of those who had gone before them. He thought he was safe in saying that St. Paul's, Westminster Abbey, and the Houses of Parliament were enough to make the fame of a great city. Why did not the great architects of to-day have an opportunity of building edifices like those? In Australia they were going to establish a Capital, and they were beginning where London began 100 years ago. He hoped to see that Capital be the chief city of a great nation, for Australia was larger than the United States of America, and it was going to be a great nation. He hoped that that Capital would have the advantage of a wise system of planning, and he hoped that the very best plan the world could produce—whether it came from Australia, from England, from Germany, or anywhere else—would be adopted. There was one good thing about architects: their architectural powers might go fallow for 200 or 300 years, but they came out again. But had architects yet been able to form reliable estimates for their unfortunate clients—estimates that were as moderate in total as the bill of extras sent in afterwards? In Australia a friend of his in an evil moment thought to improve his house, and he called in an architect—no, it was a builder, and that, of course, was where he made a mistake. He thought they would agree with that; and the extras were twice as large as the amount of the original contract. He hoped they would make it a rule whenever a member of that Institute sent in a bill for extras for work

which amounted to more than 75 per cent. of the original estimate to put him back in the class for beginners. Another thing which was a disgrace to some of them in London. When would the genius of architects discover that an enormous amount of valuable space could be saved in a house by doing away with those clumsy staircases and provide just a little space for a nice lift? Was there not common sense in that! As to town planning, there was one point he would like to refer to. In a city like London, where there were so many people living, it was almost impossible to have a good system of garden planning as well as a good system of architecture; but he would like to see garden planning made a more prominent feature of architectural work than it appeared to be. There was some beautiful garden planning in England, but garden planning was not made as much of as it should be in connexion with small houses throughout the country. In conclusion, the speaker said that, great as the past of the Institute had been, he was sure that the future would be even more distinguished.

Lord Plymouth,

in seconding, said, in regard to the President's extremely interesting address, that, although many hard things might be said of architecture in London and the country generally, he honestly believed it was due mainly to the inability of those who had been responsible for the financial part of building—of those who had the wish and desire to have buildings erected—it was due to their inability to appreciate what was the best and finest in architecture that the failures were mainly due. The Institute rightly represented the best architecture, and to them and other competent architects of the country one looked for a lead for the best in architecture, and he believed that that fact was becoming more and more recognised than it had ever been before. When he occupied a position in the Office of Works, one thing that was constantly in his mind was that it would be a great thing if public bodies in London would look to some established small committee of experts—the Royal Institute would obviously be prominently represented—to pass work that was being done, and would put themselves a little more into the hands of those who had studied all their lives this great art of architecture, rather than hurriedly and rather blindly to go into some big or important architectural work without being always adequately equipped for it. He thought there was a tendency in this direction, but he was perfectly convinced that the position of the Institute of British Architects—the place which it held in the country—was being strengthened year by year, and it was being acknowledged that it truly represented the best knowledge and feeling for this great branch of art.

Mr. W. J. N. Millard

supported, and said a few words about the President himself, having known him for many years. He (Mr. Millard) was in Street's office when Mr. Stokes was appointed clerk of works to Christchurch Cathedral, subsequently he entered Street's office, and later on won the Royal Institute of British Architects' Pugin Studentship, and later still became President of the Architectural Association—and what he did for the Association, and how he did it, most of them knew.

Mr. H. T. Hare then put the vote of thanks, which was heartily agreed to, and the President having replied, the meeting terminated.

The next meeting—a business meeting—will be held on November 21.

BELGRAVE MANSIONS, GROSVENOR-GARDENS.

THE NEW DINING-ROOM.

GREATLY improved accommodation has now been obtained at Belgrave Mansions by taking in and converting one of the frontage shops on both ground floor and basement. The former coffee-room has been converted into a smoking lounge, with a screened-off corridor leading to the new dining-room. New lavatories and cloakrooms have been provided for both ladies and gentlemen, also a clerks' office on the ground floor, as well as new staircases for both the staff and the visitors' servants, together with a new service-room for dining-room and lounge.

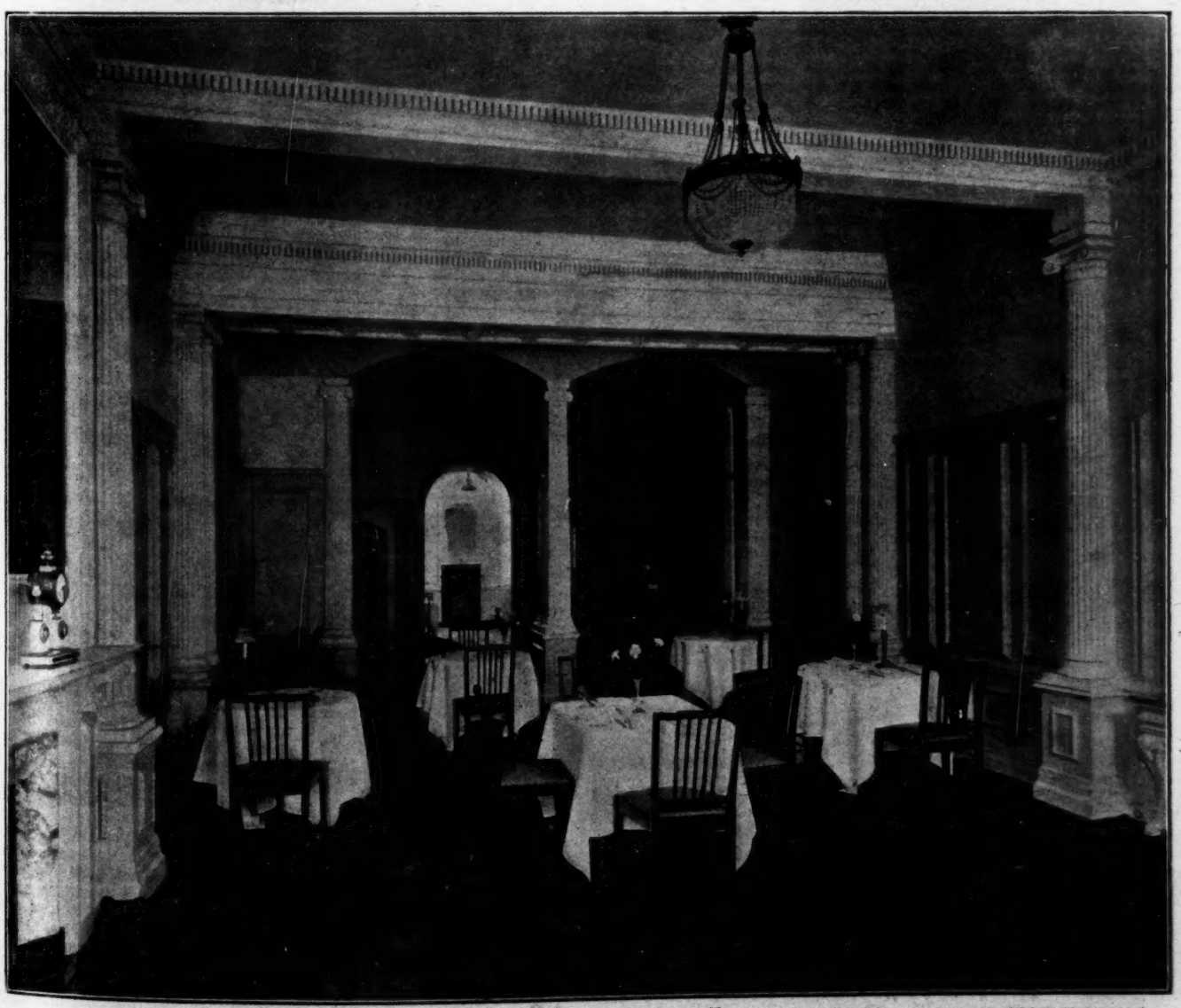
The dining-rooms, communicating by an archway, provide for the ordinary daily requirements of the residents and their guests, as well as for occasional private parties and dinners, and for this purpose they can be separately served from the new service-room.

The back dining-room has a pleasant outlook on the new garden lately laid on the back of the mansions.

Great improvements have been effected in the basement in reorganising the kitchen and service arrangements.

A new dining-room for visitors' servants has been provided, new stillroom, service-room, and other conveniences, and both light and air have been everywhere introduced, and the ventilation improved.

The work has been carried out without interruption, and with a minimum of disturbance to the residents and visitors, and in a remarkably short space of time.



New Dining-Room, Belgrave Mansions.

The architect is Mr. Arthur T. Bolton, F.R.I.B.A., of Victoria Mansions, S.W., and the contractors were Messrs. George Trollope & Sons & Colls, Mr. Lester being the foreman in charge.

The quantities were prepared by Messrs. Widnell & Trollope, of Tothill-street, S.W.

The constructional steelwork was supplied by Messrs. M. T. Shaw; pavement and stall-board lights, Messrs. Hayward Brothers; sanitary fittings by Messrs. Morrison & Ingram; ventilating electric fan by the Sturtevant Company; the grates by Messrs. Robbins, of Dudley; marble and tilework by Messrs. Van Straaten; locks and furniture, Messrs. Gibbons, of Wolverhampton; electric lighting by Messrs. Pearson. The chandeliers were selected in and supplied from Paris. The plaster modelling and wood-carving have been executed by Mr. Rogers at Messrs. Trollope's works from the architect's designs.

ARCHITECTURAL SOCIETIES.

The Royal Institute of the Architects of Ireland.

An ordinary meeting of the Council of this body was held at 31, South Frederick-street on Monday last. The President, Mr. F. Batchelor, F.R.I.B.A., occupied the chair. There were also present:—Messrs. G. C. Ashlin, C. H. Ashworth, J. H. Webb, F. Hayes, A. E. Murray, G. P. Sheridan, G. F. Beckett, L. O'Callaghan, R. Caulfeild Orpen, H. Allberry, and C. A. Owen, Hon. Secretary. The minutes of the previous meeting having been read and signed, the correspondence was dealth with. The question of Licentiates of the R.I.B.A. was also considered, and the Hon. Secretary was requested to communicate with the Secretary of that body. A notice of motion as to the provision of machinery and syllabus for the studentship examination was postponed in order that further information as to the matter might be obtained from the minutes. A notice of motion with reference to an alteration of the by-laws was handed in. The house list for submission to the members, in connexion with the election of Council, was prepared.

New Dining-Room, Belgrave Mansions.

Manchester Society of Architects.

On Wednesday, November 2, the second of the meetings of the session was held, when Mr. Edgar Wood exhibited to the members a fine collection of photographs, fabrics, and tiles which he has collected during a tour made earlier in the year to Constantinople and Athens, as well as some water-colour drawings made during the tour.

On a bird's eye view of Constantinople. Mr. Wood first pointed out the general plan of the city, and indicated the principal buildings, and afterwards described in detail some of the features of Santa Sophia and the mosques which he visited. A very fine example of internal incrustation with tiles instead of marble was the mosque of Rusken Pasha, where the walls are lined with most gorgeous tiles. The general effect he had felt to be disappointing when compared with that ot Santa Sophia, for while the tiles were extremely beautiful in themselves, they lacked the dignity of the marble treatment which such interiors call for. The tile treatment of tombs and small structures was, however, very fine. Speaking of the impressiveness of the Mohammedan ritual, Mr. Wood described the splendid effect of the lighting of Santa Sophia. There is what he might call a flood of light formed by a plane of innumerable lamps, 9 ft. from the pavement, through which the form of the mosaic-covered dome can be dimly seen, and as the walls and piers and anything that would seem to give, say, measure to the height of the building, are lost in the dazzling light of the lamps, the effect is one of limitless size and most wonderful mystery. Although the treatment of the apse at Santa Sophia is so successful, the device there adopted, of three domed apses opening from the great apse, is not followed in the later mosques, where more complicated means are adopted, often resulting in awkward shapes and the loss of the fine simplicity of the earlier form.

The fabrics and tiles which Mr. Wood has brought home are of great interest and beauty, and members were especially glad of the opportunity of seeing his delightful water-colour drawings of Constantinople, and of buildings on the Acropolis at Athens.

Leeds and Yorkshire Architectural Society.

At a general meeting, the first of the winter session, held in the Society's newly-acquired room at the Leeds Institute, on Thursday, November 3, the President, Mr. Sidney D. Kitson, M.A., F.R.I.B.A., announced the results in the competitions for the various prizes offered by the Society. The Silver Medal and President's prize for the best set of measured drawings had been awarded to Mr. J. H. Farrar for drawings of Holy Trinity Church, Boar-lane, Leeds; a consolation prize having been awarded to Mr. P. H. Audsley for drawings of Tickhill Church, Yorkshire. The prizes for design had been won by Mr. F. L. Kruckenberg (first), and Mr. W. Voelkel (second); the prize for sketching by Mr. E. H. Gibson, and that for construction by Mr. G. H. Foggitt. In the Sketching Club competitions, the prize for the best set of sketches had been awarded to Mr. J. H. Farrar, and that for the best studies of ancient buildings to Mr. J. T. Pilling. In briefly commenting on the works entered, the President said that, although the amount of competition was disappointing, much of the work had attained a high standard of quality. A short time was spent in examining and criticising the drawings, and a further exhibition of the prize works was held at the general meeting on Thursday, November 10, at the Queen's Hotel, Leeds, when the President read his address, and the prizes were presented; the meeting was followed by the annual smoking concert.

NOTTINGHAM ARCHITECTURAL SOCIETY.

THE Nottingham Architectural Society opened their winter session on October 31, when Mr. R. Evans, jun., F.R.I.B.A., delivered his Presidential address, in the course of which he said:—

"Our rules, which we have just revised, and copies of which are now being circulated, summarize the objects of our Society as follows:—(1) Promotion of union and professional integrity amongst its several classes of members; (2) uniformity of practice; (3) general advancement of architecture and allied arts.

The two first items are very closely connected, and are of the very greatest importance. It is most essential that we should obtain and keep the confidence of our clients, and to do this we must have uniformity of practice, which is based upon professional integrity, and will safeguard us in times of dispute.

Professional Practice.

To uphold the dignity of the profession and to keep it as a profession our system of professional charges should be above suspicion.

It is most necessary that an architect should inspire his clients with the idea that he is doing his best for them and protecting their interests. At the same time we ought to hold the balance fairly in the interest of the contractor.

There are customs in the profession which in a court of law might lead to a considerable amount of trouble, unless it could be established that a definite custom was exercised in the profession.

Take, for instance, the question of quantities and measuring-off fees for extras. As you know, it is recommended by the R.I.B.A. that payment should be made by the client, but in many cases it is not so.

It is absolutely essential that quantities should be got out, and it is quite fair that the clients should pay for them.

The general custom is for the fees to be included in the estimate and paid by the builder on receipt of the first certificate, but this should be done with the knowledge of the client.

I wish to touch on a point where, I am afraid, I shall not find all my brother architects in agreement. I have been approached several times recently by contractors as to a point of practice. These contractors object strongly to being asked by architects to forward to them cheques for payments for provisional amounts. I entirely agree with these contractors, and go further and say it is most essential for the maintenance of the integrity of the profession that no money should pass through the hands of any architect.

It may be quite honest, and naturally should be, but there is the possibility of the architect being placed in a questionable position.

Uniformity of practice is what we ought to aim for in every branch of the profession. Many of us are Freemasons, and, following back to the days of the Renaissance, we find in Italy that there was a real genuine brotherhood between craftsmen.

In these days, owing, I suppose, to severe competition, we have allowed petty jealousies to step in and stifle to a great extent good-fellowship and generous-minded admiration of others, but I think we can fairly say that at the present time we, as a Society, have advanced considerably towards a more united action on all points, and, thanks to the energies of several members, have tried to help the younger members of the profession by visits to various work in progress and by instituting and supporting a Designing Club and arranging meetings for the criticism of the drawings.

Competitions.

I think we can congratulate ourselves that competitions are now managed more satisfactorily than formerly, but it has been brought to my notice that in the present state of business it is not fair to limit a competition to a few competitors. Personally, I think it is better to pay the few a small fee than to throw a competition open and waste an enormous amount of work, but I should be glad to have a discussion on the point.

Now that all competitions are arranged in accordance with the conditions sanctioned by the R.I.B.A., with a competent assessor, we can feel satisfied that an unbiassed opinion will be given, and the decision accepted in the same spirit that a cricketer accepts the umpire's verdict and walks to the pavilion with a smile on his face, if possible.

Licentiates.

A Special Committee of the R.I.B.A. has been formed to deal with this matter, and a postcard has been sent to every practising architect in the London Directory and the Home Counties inviting them to a meeting on November 22, when the scheme for the admission of Licentiates will be explained.

Town Planning Bill and Conference.

I was exceedingly sorry not to be able to attend the Conference, but was glad to inspect the exhibition of plans in Burlington House with Mr. Bromley. A very amazing exhibition it was, and one which would have taken many days thoroughly to examine.

The chief conclusion I came to was that, however greatly an improvement in town planning is needed, it must be helped by an alteration in the labour market. New work is severely handicapped by prices, and until some difference is made we cannot hope to see great developments.

I will not say more on this question, as Mr. Heazell and Mr. Sutton are to open a discussion on this matter on January 3."

An interesting discussion followed. During the evening Mr. A. N. Bromley, F.R.I.B.A., on behalf of the subscribers presented a silver rose-bowl and cigarette-case suitably engraved to Mr. W. B. Savidge, A.R.I.B.A., as a mark of appreciation of his services as Hon. Secretary to the Society for the past five years.

COMPETITION NEWS.

Branch Libraries for Hackney.

The Hackney Public Libraries Committee report that there is available 15,850*l.* 14s. 1d. for the three branc libraries proposed to be erected. In regard to the appointment of advisory architect, the Committee, with a view of securing the best possible advice, approached the President of the Royal Institute of British Architects, and, in response to their request, he nominated six architects, who are fully qualified and who have designed public libraries. The architects were asked whether they would be prepared to advise the Council as to the method of procedure, the sum of money which should be allocated to each building, and to report generally on a scheme, for a fee of 15*l.* 15s., it being a condition of appointment that the Council would not undertake to employ the advisory architect selected to prepare the plans and supervise the erection of buildings, but, if they did so, the fee paid for the work now required would merge in the commission payable. Replies were received from four of the architects agreeing to undertake the work for the fee mentioned, and of the two remaining, one expressed his regret that, owing to his present engagements, he could not undertake more duties, and the other required a fee of fifty guineas. After carefully considering the names suggested, the Committee had chosen for the final choice by the Council the three architects named hereafter:—Mr. E. Cooper, F.R.I.B.A., 11, Gray's Inn-square, W.C.; Mr. Alfred Cox, F.R.I.B.A., 4, Adam-street, Adelphi; Mr. H. T. Hare, F.R.I.B.A., 13, Hart-street, Bloomsbury.

Stockport Library.

In reference to our review of this competition last week, we would point out, in fairness to the Assessor, that the conditions as to cost were not absolute, but were dealt with in a clause reading as follows:—

"The Committee are of opinion that a suitable building can be erected for 9,000*l.*, but each competitor is to form his own estimate of the cost of carrying out his design, and should no suitable design be submitted the estimate of which comes within that figure, the assessor shall not be bound by it, but the cost, nevertheless, shall be a material consideration in the award."

City Planning, Antwerp.

The awards in this competition (see our issue May 7, 1910, page 529) have been made by the jury.

The first premium, of 1,000*l.*, goes to M. Henri Prost, of Paris; the second, of 400*l.*, to M. J. Marcel Auburtin, also of Paris; the third, of 200*l.*, to Messrs. Forbath, Lechner, & Warga, of Budapest, and an additional prize of 40*l.* was awarded to M. A. Van Mechelen, of Antwerp.

Twenty-seven designs were submitted, and we are requested to notify our readers that these will be on view in the Salle des Fêtes, Antwerp, till the end of November.

LEGAL COLUMN.

Grinling Gibbons Carvings and Settled Estates.

The decision of a Judge of the Chancery Division in the case of Lord Chesterfield's settled estates is of some interest. The mansion house was rebuilt some time between 1671 and 1696, and certain carvings in the form of decorative frames or panels attributed to Grinling Gibbons were then placed in the house fixed by nails or pegs driven into stiles built into the walls. They formed part of the internal decoration of the house, and had remained there ever since, although possibly not in their original positions, as there was evidence that they could be removed without making any difference to the panelling of the rooms. The late earl had settled his estates, but the present earl, under the Settled Land Acts, had sold the mansion house, the carvings being expressly excepted from the sale, and having been taken down. The question for the Court was whether, under the late earl's will, the present earl was entitled to those carvings as his absolute property, or whether they passed with the estates in settlement for the benefit of those entitled in reversion. The Court held that the carvings were affixed to the inheritance in a definite way, and were intended to form part of the house, and therefore passed with the settled estates, and not as chattels under the will.

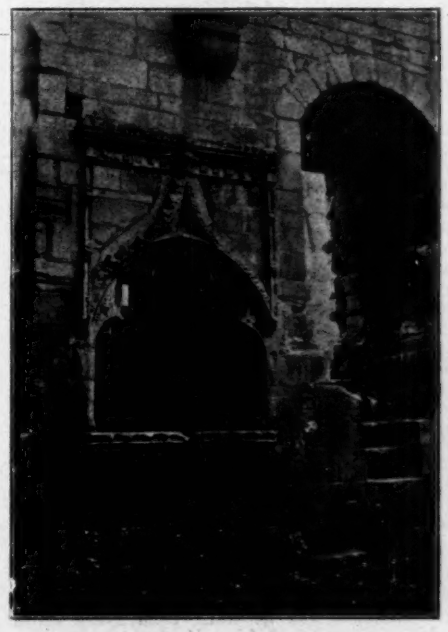
Publishing Drawings after Alteration.

The recent case Carlton Illustrators and Jones *v.* Coleman & Co., Ltd., is of considerable interest to the artistic and commercial world, and is the first decision ever given on sect. 7 of the Fine Arts Copyright Act, 1862. An artist, Mr. Garth Jones, had prepared a drawing, and sold the copyright to the defendants to be used as an advertisement of Wincarnis. There was no special agreement as to the form in which it was to be used. They had it coloured, and the drawing was also slightly altered, and in this form they used the advertisement with Mr. Jones's signature attached; they also issued a circular stating that the picture was by Mr. Garth Jones. The Court held that there had been an "alteration," and that the defendants had "knowingly published" the same so altered within the meaning of the fourth paragraph of the section, and that the plaintiff, the artist, could recover penalties, and was also entitled to an injunction. On the facts of this case, the Court appears to have held that, the colour being an important element in the matter, the colouring amounted to an "alteration" within the meaning of the Act, but it is important to observe that the Judge was careful not to decide that the mere colouring of an uncoloured drawing would in every case amount to an alteration. The lesson to be derived from this case is that, in all cases where anything is done to a painting, drawing, or photograph, the consent of the author or maker shall be obtained before it is published in its altered form.

CORRESPONDENCE.

Recess, Harewood Castle.

SIR,—In your notice of the A.A. excursion in Yorkshire in the issue of October 29, page 509, describing Harewood Castle, you mention the unusual little recess, which, as



Recess, Harewood Castle.

you do, I take to be a "buffet," although this is but a surmise.

I took a photograph of this two years ago, and I send a copy herewith, as it is a peculiar feature and uncommon. J. D. CRACE.

Architects and the Royal Institute of British Architects.

SIR,—May I, through the instrumentality of your influential organ, call the attention of all architects and assistants to the importance of the new departure which the Royal Institute has inaugurated with the object of drawing together into the central organisation every member of the profession throughout the United Kingdom and the Empire, whether now or not yet in practice?

One of the latest acts of our late beloved King was to grant a new charter with the above object in view, and to create a new class to be called Licentiates of the Royal Institute.

To this class all professional architects who have been either five years in practice or ten years engaged in the study of architecture are eligible as candidates without examination. Already several thousands have applied for papers, and, as admission to the class is only open until next March, I would urge every architect interested in his profession to make the earliest application for admission. It is the one and great opportunity for securing corporate unity, to advance the interests of architecture and of its exponents. The annual payment is but a guinea a year. This confers many privileges, including the free receipt of the *Journal* of the R.I.B.A., containing the valuable papers read at the

general meetings, and illustrations of most interesting work, old and new, all over the world. It gives Licentiates a place of call in London, with access to the library, the best of its kind in the kingdom.

The Institute is only awaiting the enrolment of the Licentiates to make application to Parliament for recognition of all *bonâ fide* architects, and those who stand aloof are only delaying this application.

Part of the provision of his late Majesty's charter is to create machinery by which every Licentiate may, if he so desires, proceed to the Fellowship as soon as he is eligible.

All assistants who are eligible are assured of a hearty welcome.

It only remains to add that the allied societies of architects all over the Empire are in sympathy with this great movement, and many have taken, and are taking, active steps to further the objects in view.

IAN MACALISTER,
Secretary, R.I.B.A.

The House with the Little Front Garden.

SIR,—In the interesting article on Salisbury in the last number of the *Builder* one sentence stands out prominently:—

"Rare indeed is the house with the futility of the little front garden."

There is courage behind such a sentence, and my only object in writing is to ask that the author may be encouraged to enunciate this idea further.

One cannot argue on the simple statement, but if the author is prepared to elaborate further it should give good ground for a most interesting discussion.

GEORGE L. PEPLER.

The Town Planning Conference.

SIR,—I was pleased to read in your columns the letter from the representatives of the British Constitution Association at the Town Planning Conference. An admirable point is brought out by it in reference to the London squares—that long succession of open spaces extending right through the capital from east to west, enclosing beautiful gardens—that they are the work of private enterprise. Let me add something to the report. the fact, namely, that the enlightened self-interest of the London landowners was a feature of that day throughout England, and a similar spirit, guided by private taste and refinement, also of other periods—to wit, the garden cities of Oxford, Cambridge, Cheltenham, Bath, Bournemouth, and Eastbourne. Many other examples might be cited. The individualist was at work beautifying cities while he enriched himself, in many cases, however, with no thought of personal benefit, almost invariably observing "the courtesy of architecture," and considering the public interest—that is, the interest of other individuals. The State, the despot "benign" or otherwise, and the legislature had practically no part in producing these amenities.

JOHN C. PAGET.

Wealdstone.

"Specifications and Quantities from a Contractor's Point of View."

SIR,—I have before me a copy of your last issue of the *Builder*, in which is a report of a paper under the above heading, read by Mr. James Parkinson on the 17th ult. before the Liverpool Architectural Society.

As one very small member of a great industry, I should like to associate myself with many of the sentiments expressed therein.

I advocate with all emphasis the abolition of any usage which permits of an interested architect or engineer being sole arbitrator in cases of dispute. And, be it understood, I don't for one moment wish to cast any reflections on the architectural or engineering professions, knowing full well that for honesty and integrity of purpose the members thereof will compare favourably with those of any profession in any country in the world. At the same time, one does occasionally encounter highly respectable gentlemen, being self-appointed arbitrators, who do not hesitate to debit contractors with the sole cost of reinstating defective work which plainly has been the result of negligence or inability of the former.

As to paragraph No. 5 and final payments, no doubt architects are sometimes placed in an unenviable position. I give a case in point:—Work completed to architect's satisfaction; accounts wound up; retention period expires in June, when the client persuades the architect to postpone issuing final certificate until December, a more convenient time for payment, notwithstanding the poor builder secured the work in the keenest of competition. In such cases I suggest that Mr. Parkinson's 5 per cent. interest be increased to that of 10 per cent.

With reference to the author's suggestion that architects should stipulate the p.c. amount of the different woods to be used, with this I wholly and thoroughly disagree, being very firmly of the opinion that the p.c. item already occurs far too frequently in every bill, to the questionable benefit to the owner and the very great detriment to the builder. An extension of Mr. Parkinson's suggestion would eventually place the builder in the position of having nothing to do with the material other than provide the labour required to be expended upon it.

Surely there is no reason why every architect should not specify—when not fettered by his client—exactly what he requires, and I am equally sure no difficulty will be experienced in finding plenty of builders equipped with a sufficiently comprehensive knowledge of the King's English, together with a knowledge of the trade, that will ensure a correct interpretation.

For architects to specify that a certain price shall be paid for all wood used in their work—well, to use Mr. Parkinson's own words, it makes me smile.

As a matter of fact, are we not all conversant with the more able man of business, who secures the best goods at the same cost which his less alert competitor will pay for goods of an inferior character? It is all a matter of business, and anything which tends to curtail operations, stultify individuality, or check healthy competition is not good. The whole question is that of specification and its adherence, which can be and is achieved by the supervision of the architect.

Now, sir, as to quantity surveyors and quantities, I do certainly think that some of these gentlemen require encouraging in their art, that is, if builders are to continue to compile their tenders on a bill of quantities prepared by an independent surveyor. It must be insisted upon that the quantities shall be an absolute reflex of everything that is embodied in the contract, be it materials or labours, large or small.

I know certain quantity surveyors in practice on the north-east coast whose bills are exemplary, whilst others are pregnant with the lumping system and the omission of labours.

I am at present interested in a job the quantities for which were prepared by a firm of surveyors of considerable repute. In connexion with this job I have to make a screen to fit a room 14 ft. long. The extreme ends of the screen are to have 4-in. by 3-in. posts, with two 4-in. by 3-in. mullions placed as intermediates; the bottom rail or sill-piece is 4 in. by 3 in., as is also the top rail. The whole thing is filled in with 1¼-in. grooved and tongued and V-jointed boarding. Note: the quantity surveyor has taken off the length of top rail and sill as 13 ft., which is the length of the screen less the thickness of the posts and mullions. From this you will see the surveyors have not only omitted the labours consequent upon framing the sill and rail to the posts and mullions, but have actually not allowed material which will permit of the framing of the horizontal to the vertical members. I suppose if we give them a 6-in. spike in place of a tenon or dovetail we would be called jerry builders.

This is a small matter in itself, but, coupled with other examples, it warrants one in looking with that dubious eye of scrutiny over the pages of the bills of some of our quantity surveyors.

A. V. C.

North-East Coast.

ENGINEERING SOCIETIES.

The Society of Engineers (Incorporated).

The following is an abstract of a paper on "Public Slaughter-Houses," by Mr. S. M. Dodington, read at Caxton Hall, Westminster, on Monday. The paper, which is the outcome of many years' patient study and extensive travel on the part of the author, begins with a reference to the vital necessity of public slaughter-houses from the standpoints of public health, practical economy, and humanity, and, after a brief historical survey, alludes to the conditions of slaughtering and meat inspection now in vogue in this country as a national disgrace, and as unworthy of the name of "system." The private slaughter-house, with its attendant evils, is strongly condemned, and the backwardness of our municipalities in making provision for public abattoirs is contrasted with the elaborate and careful attention which has been given to the matter in other parts of the civilised world.

An outline is given of the principal points to be observed in order to ensure humane methods of slaughtering under efficient supervision, and with a proper system of meat inspection; some of the principal types of public slaughter-houses are discussed, and the arrangement of typical Continental abattoirs described in detail. A pleasing exception to the usual inadequate British way of dealing with this matter is to be found in the slaughter-houses controlled by the Admiralty, which were erected or remodelled, after extensive inquiries, by a Commission, and are regulated by well-considered and efficient rules.

Stress is placed upon the qualifications which must be possessed by the veterinary surgeons in charge of the public slaughter-houses in Germany, in contrast to the inefficient way in which meat inspection is usually performed in England, by men whose qualifications for such important work are often quite inadequate. In general, the public abattoirs of Germany may be said to be a pattern for the world to follow, the care bestowed on their design being well repaid by the many advantages arising from the centralisation and efficient supervision of the slaughtering. Switzerland, Holland, Denmark, and Scandinavia are closely following Germany's lead.

There is plenty of scope for the engineering, not only in designing the structural work of abattoirs and cattle markets, but in improving the instruments used for stunning animals and the plant for handling their carcases, not to mention the work in connexion with cold storage, water softening, sterilisation, electric lighting, drainage, etc., all of which form essential parts of the modern slaughter-house. Unfortunately, one has to travel abroad in order to see these matters properly dealt with, and the paper strives to put forward some ideas on public slaughter-houses by which this country would greatly benefit if public opinion could be sufficiently aroused.

FIFTY YEARS AGO.

From the *Builder* of November 10, 1860.

Travelling Studentship in Memory of the Late A. Welby Pugin.

THE subscriptions towards the endowment of a permanent fund, to be entitled the "Pugin Travelling Fund," the interest arising therefrom to be awarded to an architectural student in such manner and at such periods as may hereafter be decided, now amount to about 750*l*. To the studentship, as our readers know, it is proposed to add a medal.

This memorial, whilst providing a lasting recognition of the services rendered to art by the late Mr. Pugin, will be the means of promoting in a thoroughly practical manner the study of architecture. It is most desirable that the support of this proposed foundation should not be looked on as a party badge. Men on both sides of the style-question have already subscribed to it, and the Institute of Architects will, it is understood, accept the office of dispensing the funds. While we have Mr. Beresford Hope and Mr. Scott acting as joint treasurers, we find Mr. Tite, who seems just now bent on doing liberal and wise things (all praise be to him for it), subscribing his twenty guineas to the fund. The committee will need at least 1,500*l*. or 2,000*l*., and we shall hope to see provincial architectural societies, architectural students, and art-workmen lending their aid to bring up the amount to the latter sum.

EDINBURGH.—We should have mentioned that the large drawing by Mr. Home (Milnes Court), given in our last issue, is one of those included in his book *Old Houses in Edinburgh*, published by Mr. W. J. Hay, John Knox House, Edinburgh.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.—An extra general meeting (ordinary) will be held on November 28 at 8 p.m., to hear a special paper by the Cavaliere Cesare Formilli on "The Monumental Work of the Cosmati at Westminster Abbey," with lantern illustrations.

THE
BUILDER.
NOVEMBER 12, 1910.

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The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

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All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

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N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

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MEETINGS.

FRIDAY, NOVEMBER 11.

University of London (Lectures on Advanced Engineering, at the Institution of Civil Engineers, Great George-street, S.W.).—Mr. W. Dunn on "Reinforced Concrete."—II. 5.45 p.m.

Birmingham Architectural Association.—Professor Beresford Pite on "The Gothic Revival of the XIXth Century."

Royal Sanitary Institute (Lectures for Sanitary Officers).—Mr J. E. Worth on "Sewerage." 7 p.m.

Glasgow Technical College Architectural Craftsmen's Society.—Debate: "The Business Relations of the Architect, Measurer, Master of Works, Contractor." 8 p.m.

SATURDAY, NOVEMBER 12.

Institute of Sanitary Engineers.—Visit to the British Improved Construction Company's Works, Fulham. 2.30 p.m.

MONDAY, NOVEMBER 14.

The Architectural Association (combined meeting of Camera, Sketch, and Debate Club).—Paper by Mr. Gerald C. Horsley, entitled "That Fine Draughtsmanship Conduces to Fine Architecture." 7.30 p.m.

The Surveyors' Institution.—The President, Mr. Leslie R. Vigers, to deliver an opening address. 8 p.m.

University of London (Imperial College of Science and Technology, Exhibition-road).—Mr. Banister Fletcher on "The Gothic Architecture of Central and Southern Italy." 5 p.m.

London Institution.—Mr. A. G. Temple, F.S.A., on "The Pre-Raphaelite Movement in England—Rossetti, Millais, Holman Hunt" Illustrated. 5 p.m.

Royal Sanitary Institute (Lectures for Sanitary Officers).—Mr. C. Chambers Smith on "Sewage Disposal." 7 p.m.

The Incorporated Benevolent Fund of the Surveyors' Institution.—The annual general meeting of the Donors and Subscribers, in the Lecture Hall of the Surveyors' Institution, No. 12, Great George-street. 5 p.m.

The Incorporated Clerks of Works' Association (Carpenters' Hall, London Wall).—Paper by Mr. J. Redden, "A Few Interesting Notes on Ancient and Modern Glass." 8 p.m.

Junior Institution of Engineers (Royal United Service Institution, Whitehall).—Presidential address on "The Influence of Pure Science in Engineering," by Sir J. J. Thomson, F.R.S., Cavendish Professor of Experimental Physics at the Cambridge University. 7.30 p.m.

Junior Institution of Engineers.—Reception, Dance, and Whist Drive at Caxton Hall Westminster. 7 p.m.

The Bristol Society of Architects.—Mr. G. H. Oatley on "Fountains Abbey." Lantern slides. 8 p.m.

TUESDAY NOVEMBER 15.

University of London (British Museum).—Mr. Banister Fletcher on "The Character of Greek (Hellenic) Architecture." 4.30 p.m.

Institute of Sanitary Engineers (Students' Lecture).—Mr. Nandy Hoskins on "Water and Water Supply." 7 p.m.

WEDNESDAY, NOVEMBER 16.

The Society of Architects.—Conversazione at 28, Bedford-square, W.C. 8.0 to 11 p.m.

Royal Sanitary Institute (Lectures for Sanitary Officers).—Mr. Percy Griffiths, M.Inst.C.E., on "Water Supply, Sources of Supply and Distribution." 7 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 7 p.m.

Institute of Sanitary Engineers.—(1) Annual meeting. 2.30 p.m. (2) Annual dinner, Holborn Restaurant. 7 p.m.

Royal Society of Arts.—Opening address of the one hundred and fifty-seventh session, by Sir John Cameron Lamb, C.B., C.M.G., Vice-President and Chairman of the Council. 8 p.m.

THURSDAY, NOVEMBER 17.

University of London, University College (the Carpenters' Company University Lectures on Architecture).—Mr. J. A. Gotch on "The Homes of Queen Elizabeth's Courtiers." I.—Exteriors. 6 p.m.

Royal Sanitary Institute (Lectures for Sanitary Officers).—Professor H. R. Kenwood, M.B., on "Water, Composition, Pollution, and Purification." 7 p.m.

London Institution.—Mr. Percy Fitzgerald, M.A., F.S.A., on "Calais, Old and New." Illustrated. 6 p.m.

Builders' Benevolent Institution.—Sixty-third annual dinner, Whitehall Rooms, Hôtel Métropole, W.C. 6.30 p.m.

FRIDAY, NOVEMBER 18.

Royal Sanitary Institute (Lectures for Sanitary Officers).—Mr. H. P. Boulnois, M.Inst.C.E., on "Scavenging, Disposal of House Refuse." 7 p.m.

Institution of Mechanical Engineers.—Mr. L. A. Legros, on "The Development of Road Locomotion in Recent Years" 8 p.m.

University of London (Lectures on Advanced Engineering, at the Institution of Civil Engineers, Great George-street, S.W.).—Mr. W. Dunn on "Reinforced Concrete"—III. 5.45 p.m.

SATURDAY, NOVEMBER 19.

Association of Teachers in Technical Institutions (the Northern Polytechnic).—Mr. Sandham on "Grouped Courses for Evening Building Students."

ILLUSTRATIONS.

Design for the City Hall, New York.

THIS work, designed by Messrs. McKim, Mead, & White, is described in our second article of the Construction Review this week, where some details of construction are given and illustrated.

The Little Theatre.

THE Little Theatre is formed out of the Adelphi portion of the premises formerly occupied by Messrs. Coutts, the bankers. An article in the *Builder*, dated April 1, 1905, gives some account of the old buildings, which were partly built by the Adams Brothers, but since their day had been more than once altered and enlarged. It was a considerable undertaking to scheme these into a practicable theatre of any kind, while the problem was not made easier by the necessary fulfilment of the proper requirements of the London County Council and the fact of having to respect the ancient lights of the buildings on the north side of Durham House-street. The building now resulting complies, however, with every requirement.

Owing to the former use of the premises as a bank the building was very substantially built with massive walls in cement, the greater portion being strengthened with hoop-iron bonding. This caused heavy labour in cutting openings, removing walls, etc., not usually encountered.

The vestibule, ladies' cloakroom, etc., formed part of the old No. 11 or No. 17, John-street, used as a private residence by one of the staff of Messrs. Coutts. Except for the actual shell and the arches on which the building stands there was no trace of the handiwork of the famous Adelphi architects anywhere in the building.

Great care has been exercised in carrying out the work of decoration, which is executed in the Adam style, adapted, where possible, from the original examples existing in the Adelphi. The architects also had the privilege of Miss Gertrude Kingston's skill and advice on decorative details, colouring, etc. There are four genuine old paintings in the premises (one each in the ceilings of the vestibule and the foyer and over the entrance-steps to the boxes). These were saved from a ceiling unfortunately demolished some years ago, and are probably by Angelica Kauffmann. The colouring of the walls, hangings, etc., of the auditorium is all schemed in Wedgwood tints, and the foyer is decorated in a grey tone especially suited for the display of pictures.

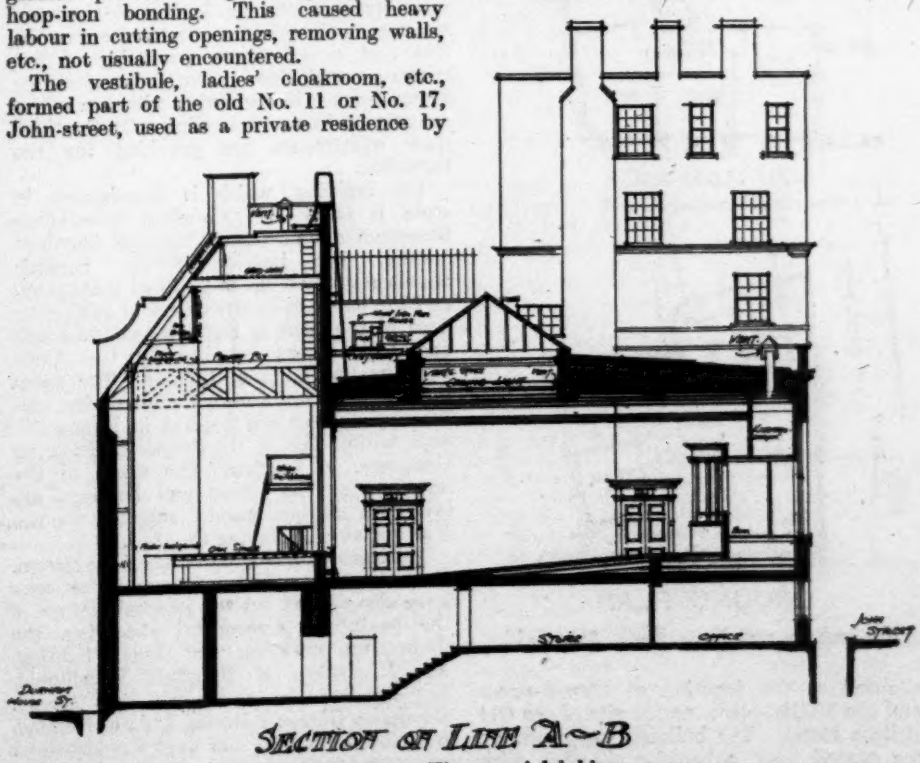
The works have been carried out at the cost of the freeholder, Mr. George James Drummond, who took a personal interest in them throughout, and to whom a great deal of the credit for the plan is due.

The accommodation is for 300 people, and the cloakrooms, etc., have been planned on a generous scale; while the set of lounges, comprising vestibule, foyer, and tea-rooms, cover an area as large as that of the auditorium itself, and form a special feature.

The floor of the auditorium has a rake of 1 in 13·75, and therefore there is a good view from every stall, no seat in the house having a side view only, while the occupants of the boxes have a full and uninterrupted view of the stage.

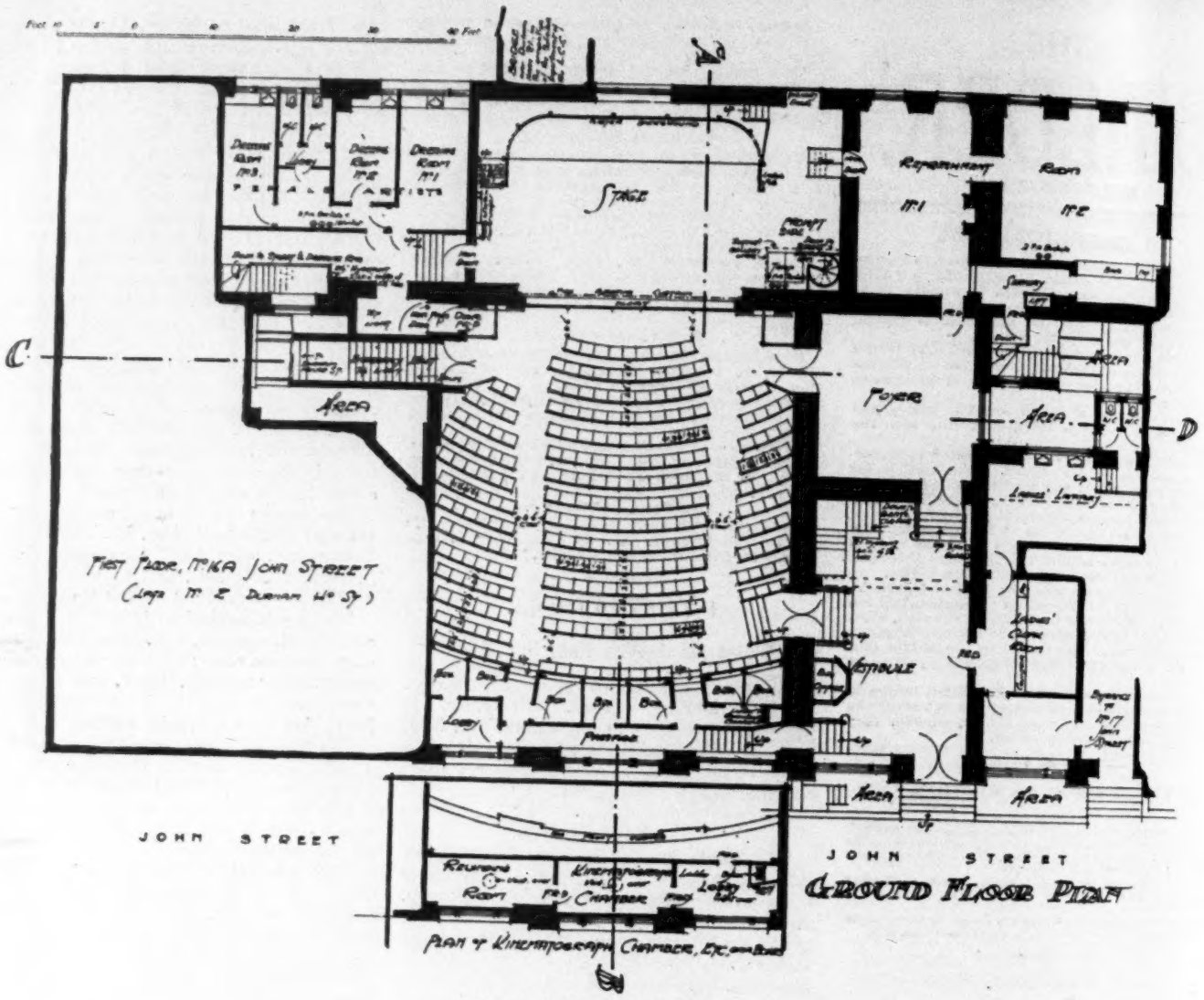
The general contractors were Messrs. Macey & Sons, Ltd. The steelwork was supplied by Messrs. Young & Co. The fireproof curtain and hydrants by Messrs. Merryweather & Sons. The electric lighting installation was carried out by Messrs. Strode & Co., who also supplied some of the fittings, the others being supplied by Messrs. Spital & Clarke. Messrs. Strode are also responsible for the heating and ventilation. The plaster decorations were carried out by Messrs. G. & A. Brown & Co., Ltd. The illuminated sign and the door furniture were supplied by Messrs. Leggott and Messrs. Spital & Clarke. The seating, carpets, curtains, etc., were all supplied by Messrs. Waring & Gillow.

The work was carried out according to the designs and under the superintendence of the architects, Messrs. Hayward & Maynard.



SECTION ON LINE A–B

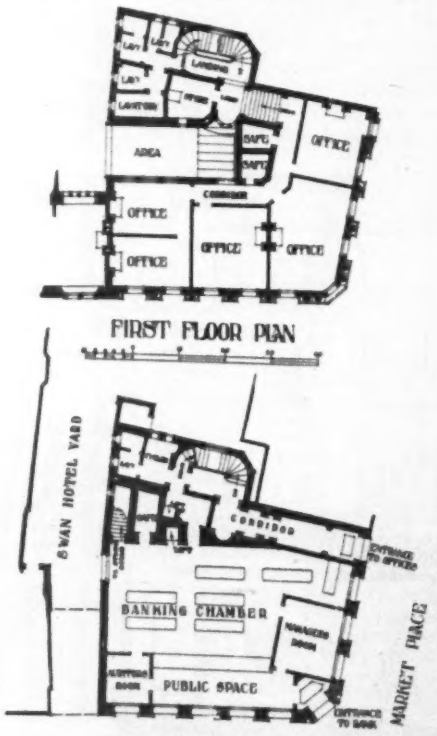
The Little Theatre, Adelphi.



The Little Theatre, Adelphi.

New Bank Premises, Mansfield.

THE new premises erected for the Nottingham and Notts Banking Co., Ltd., are



Nottingham and Notts Bank, Mansfield.

situated at the junction of Church-street and the Market-place, on the site of the Old Eclipse Hotel. The building comprises, on the ground floor, a banking chamber, with rooms for the manager, auditors, and others; safe for storing books in daily use, lift for conveying cash and valuables to the strong room below, and the usual lavatory and other accommodation. In the basement is a fireproof strong room, for the reception of cash and valuables, the entrances to which are protected by gates and doors supplied by Messrs. Chubb & Sons, Ltd.

On the Market-place side of the building is an entrance passage, leading to the main staircase, which gives access to offices on the first and second floors, consisting of five rooms on each floor. Two fireproof strong rooms for use in connexion with the offices are arranged on each landing. On the third floor apartments are provided for the caretaker.

The building, which is Renaissance in style, is faced with Mansfield Woodhouse limestone, upon a base of polished Aberdeen granite. The interior of the banking chamber is fitted up in polished mahogany, and the entrance to the offices in oak. The floor of the bank is laid with polished oak and teak blocks supplied by the Acme Flooring Co., Ltd., of London. The floors throughout are of fireproof construction, and the upper floors are finished in Euboeolith composition, laid by the Euboeolith Flooring Company, of London. The floors of the entrance to the offices and landings are laid with marble mosaic, supplied by the Nottingham Art Paving Co., Ltd.

The contractors for the building are Messrs. F. Perks & Son, Ltd., of Long Eaton, who have also carried out the internal fittings of the bank, the ornamental plastering, the decorating, plumbing, and electric lighting. Mr. J. Ashley, of Mansfield Woodhouse, has supplied the stonework, and Messrs. Goodacre, Glover, & Butler, Ltd., of Nottingham, have supplied and fixed the hot-water apparatus with which the bank is heated.

The whole of the work has been carried out from the designs and under the superintendence of Messrs. Vallance & Westwick, architects, Mansfield.

Allan Line Shipping Office.

THE new offices of the Allan Line, at No. 14, Cockspur-street, recently opened, have been fitted up by Messrs. Harrison & Spooner, of Dowgate-hill, E.C., from the drawings of the architect, Mr. Arthur T. Bolton, F.R.I.B.A., of Victoria-street, who is responsible for the design of the interior.

The outlines of the adjoining properties being very irregular, considerable difficulties had to be overcome in the design of an interior at once very long and lofty. The capitals of the order of pilasters are based on some old wood carvings which were found when the houses on the site were cleared away. It is possible that they may have come from Warwick House, from which the street at the back takes its name.

The first-class saloon passengers' department is in front, enclosed by a curved open arcaded screen of twisted colonnettes in mahogany.

The second and third passengers have a separate entrance from the main lobby. At the back is the directors' room, separated by a glazed screen of an architectural character.

The interior is all in white with a little colour introduced in the lead glazing, carried out by Messrs. Harvey & Ashby, of Birmingham.

The screens, counters, and fittings are all in Spanish mahogany. The floor of the first-class department is laid with india-rubber tiling by Messrs. MacLellan, of Glasgow.

An exterior view of this building appeared in our issue of March 23, 1907.

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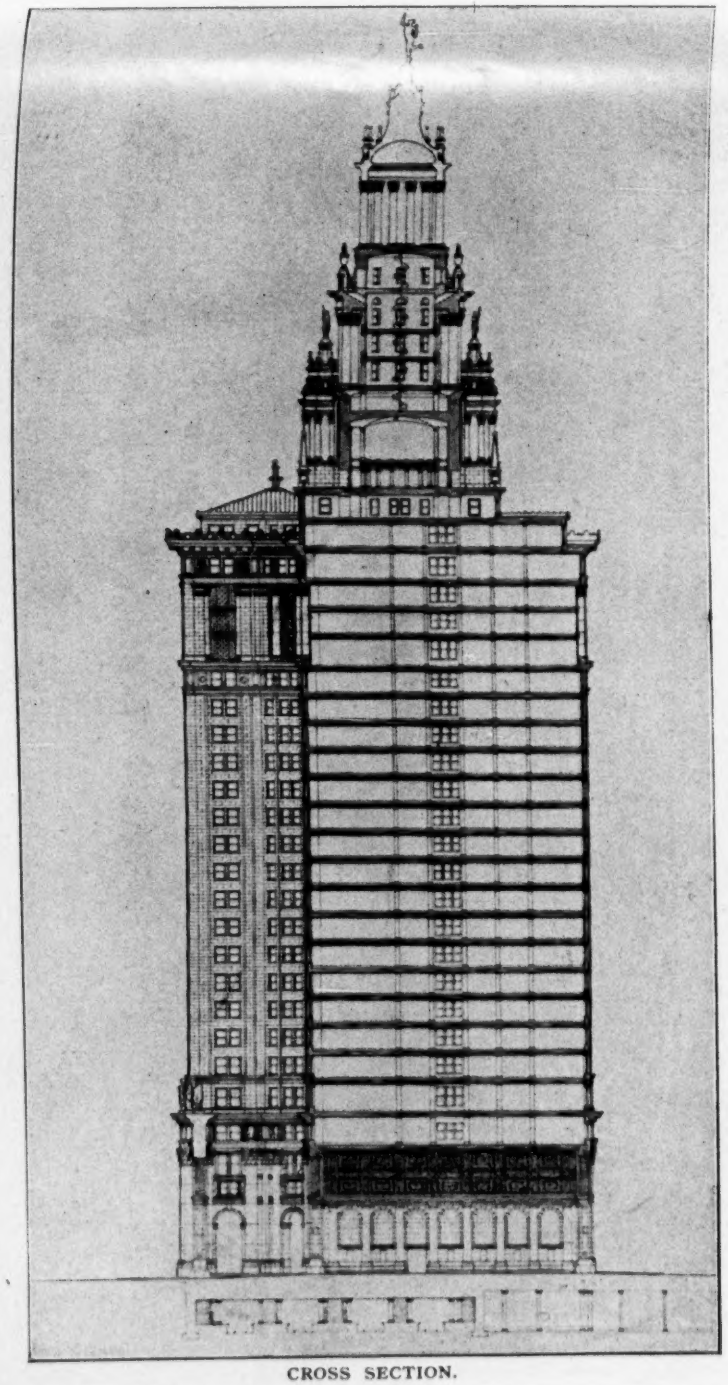
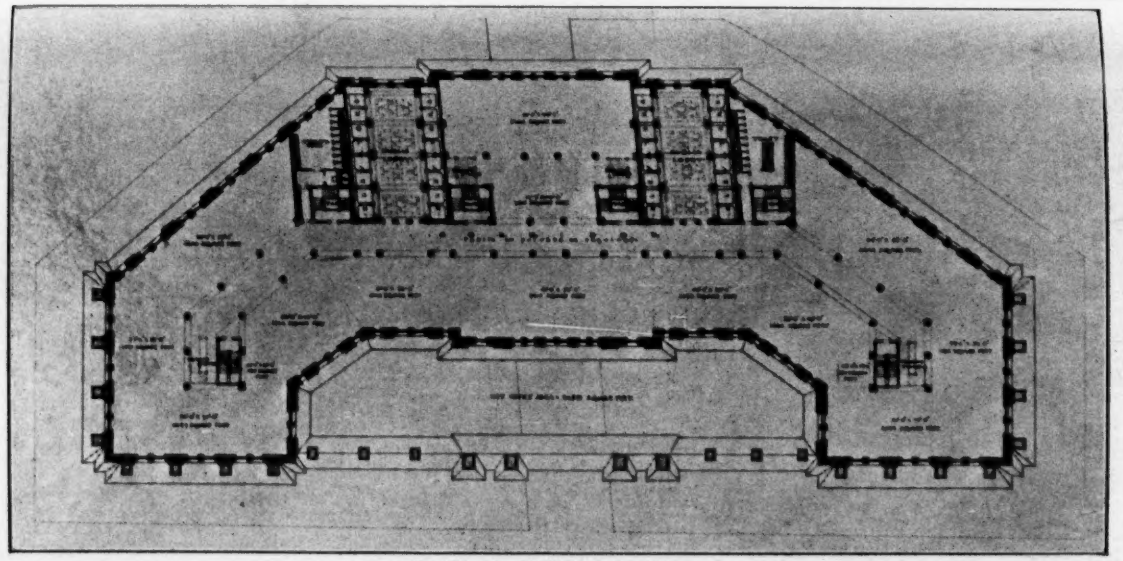
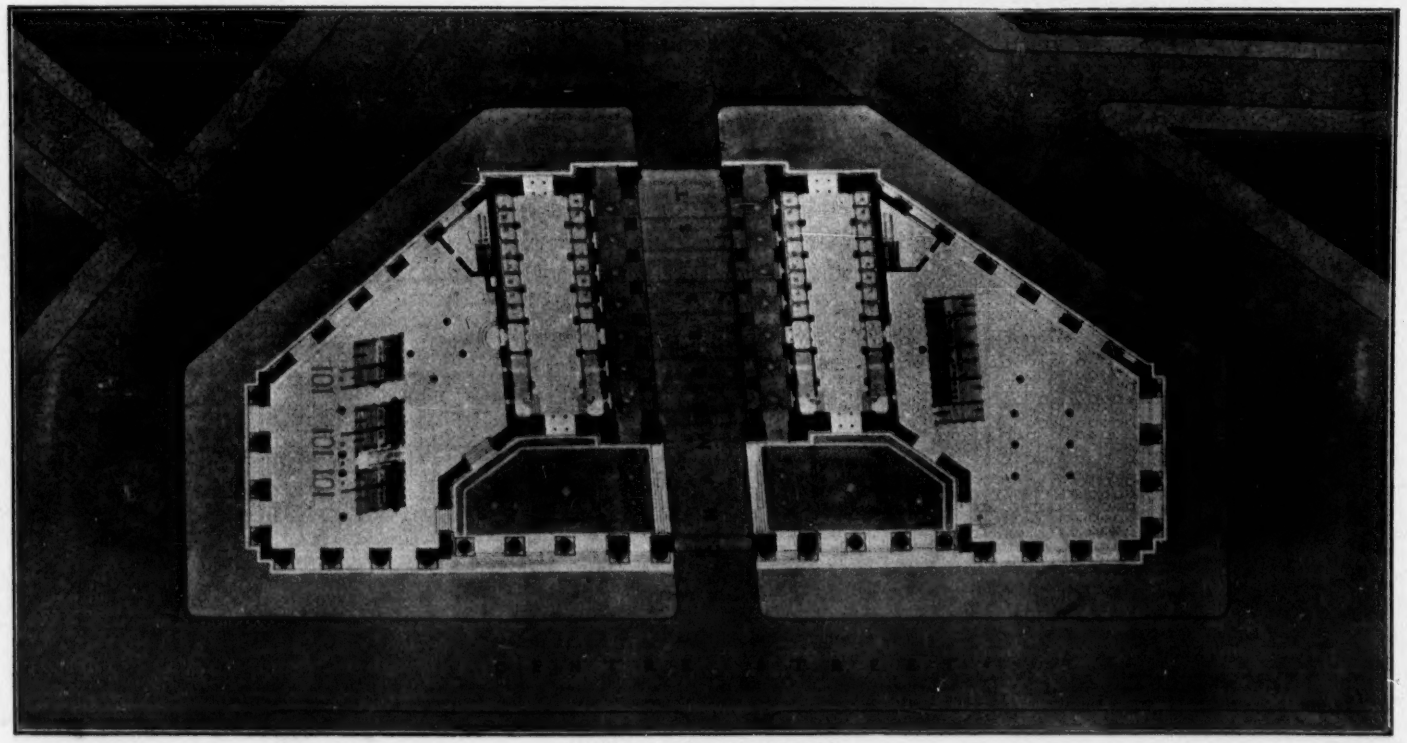
DESIGN FOR THE CITY HALL, NEW YORK.—MESSRS. MCKIM, MEAD & WHITE, ARCHITECTS.



CROSS SECTION.



PLAN OF UPPER FLOORS.



PLAN OF GROUND FLOOR.

DESIGN FOR THE CITY HALL, NEW YORK.—MESSRS. McKIM, MEAD & WHITE, ARCHITECTS.

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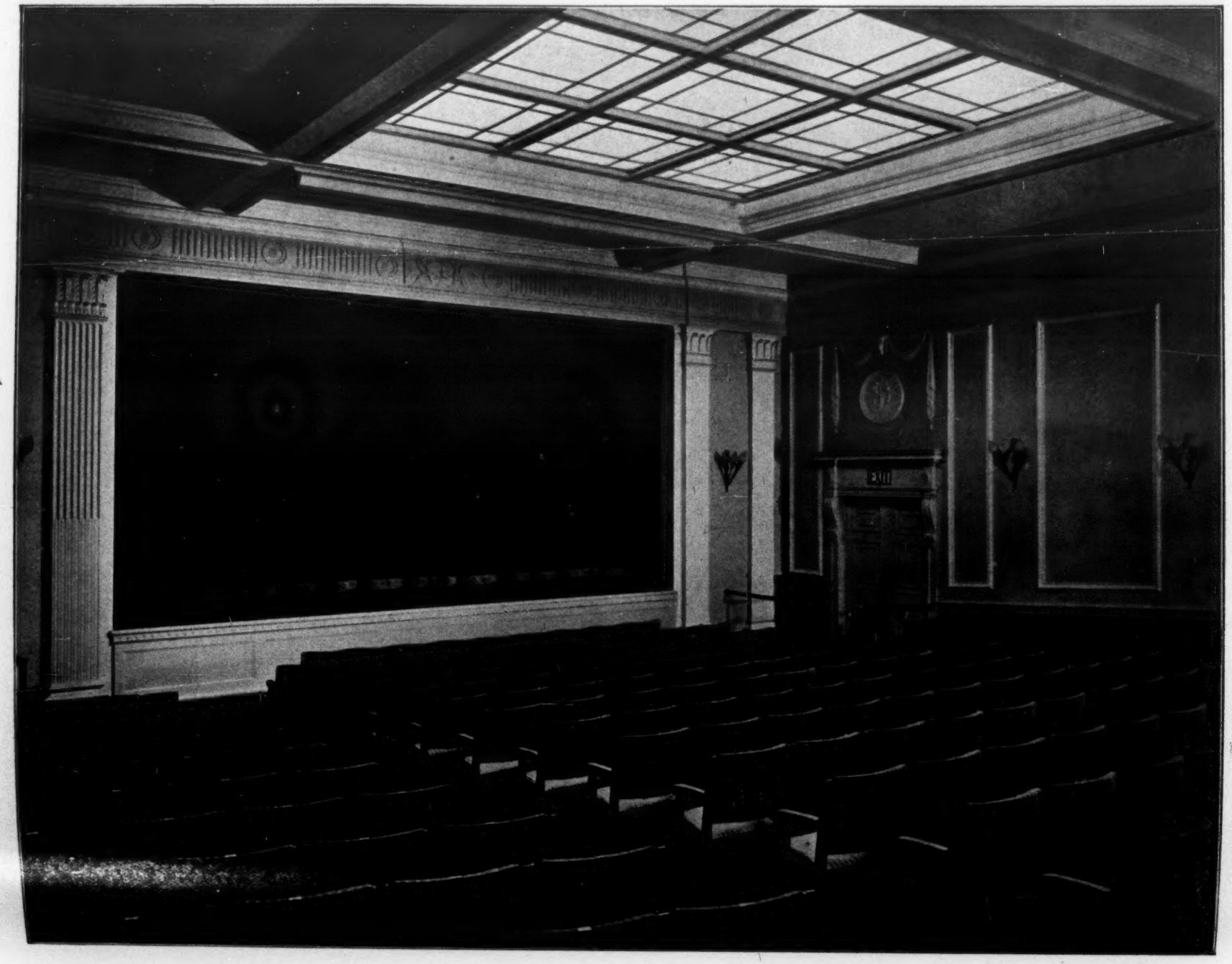

THE LITTLE THEATRE, ADELPHI: VIEW OF PROSCENIUM.—MESSRS. HAYWARD & MAYNARD, ARCHITECTS.

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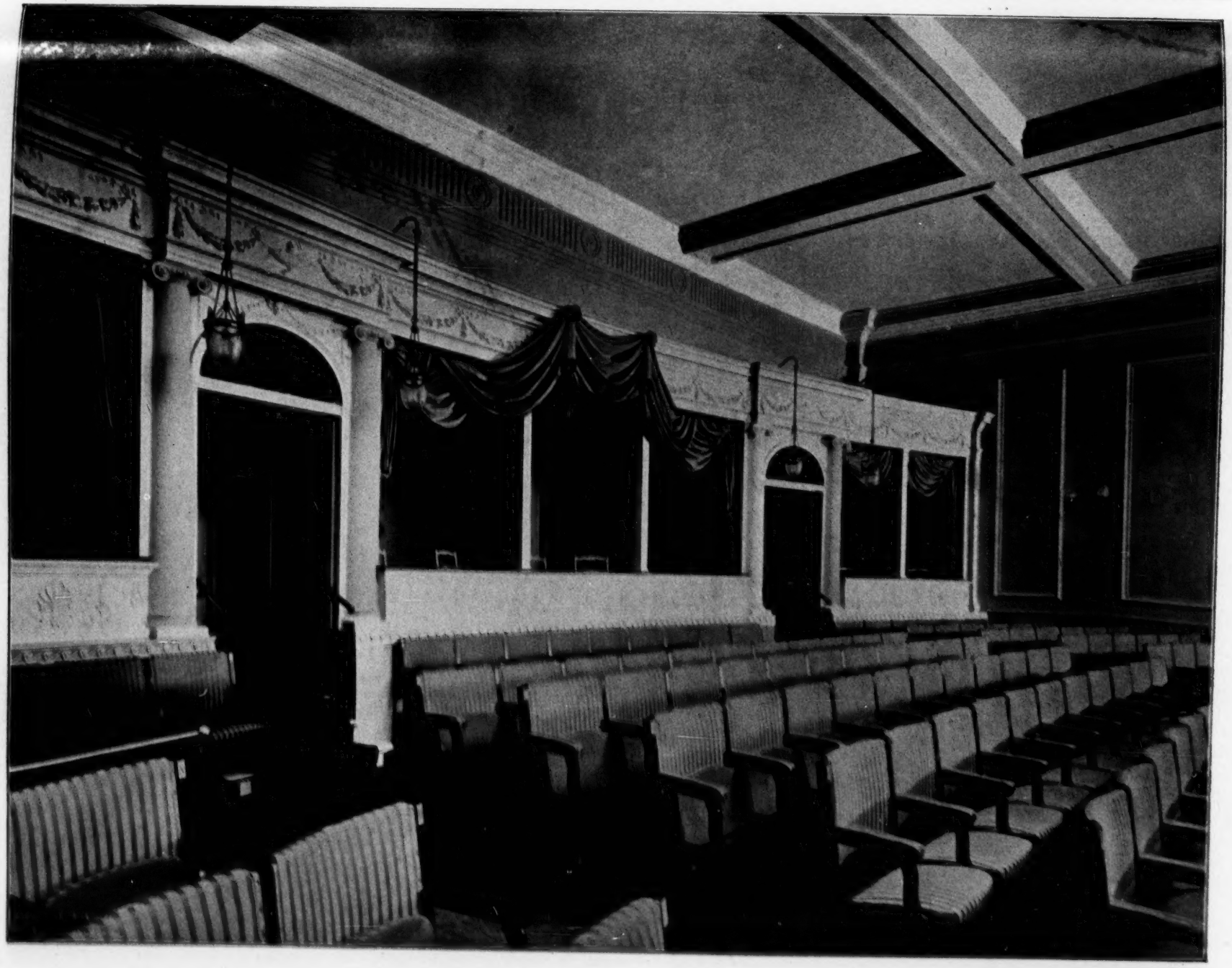

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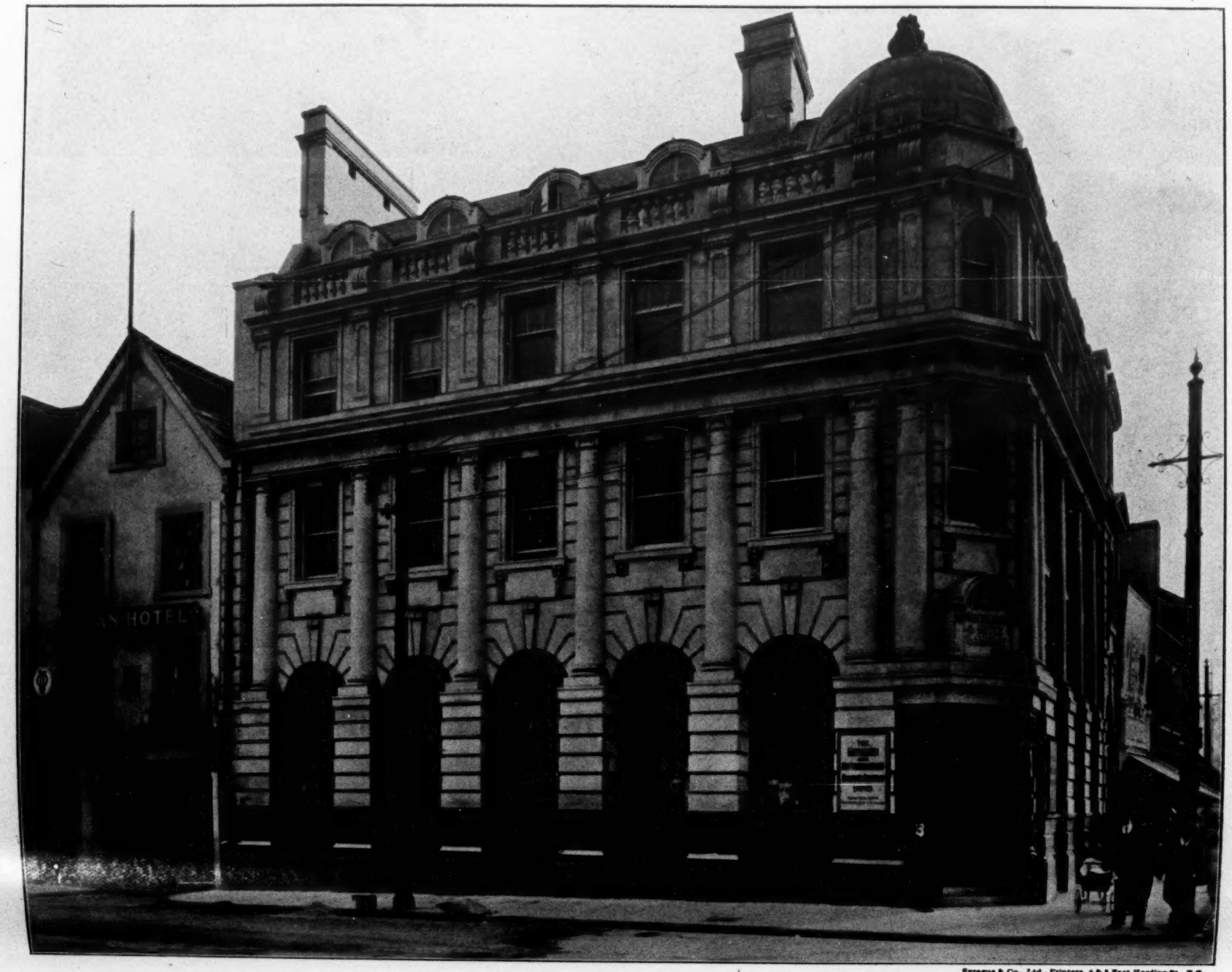
THE LITTLE THEATRE, ADELPHI: VIEW OF BOXES.—MESSRS. HAYWARD & MAYNARD, ARCHITECTS.



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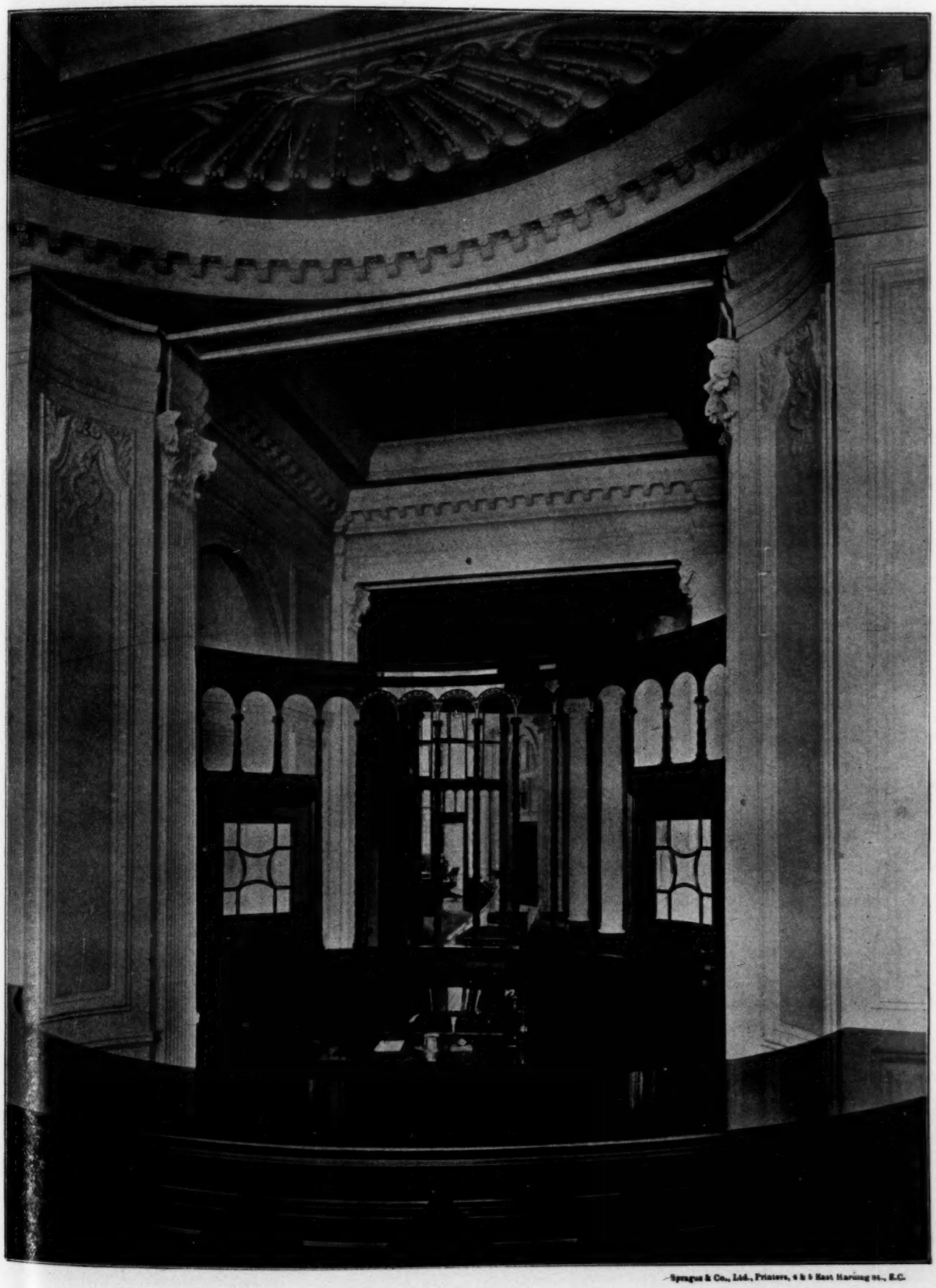
NOTTINGHAM AND NOTTS BANK, MANSFIELD.—MESSRS. VALLANCE & WESTWICK, ARCHITECTS.



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INTERIOR, ALLAN LINE OFFICES, COCKSPUR STREET, S.W.—Mr. A. T. Bolton, F.R.I.B.A., Architect.

NOTTINGHAM AND NOTTS BANK, MANSFIELD.—Messrs. Vallance & Westwick, Architects.

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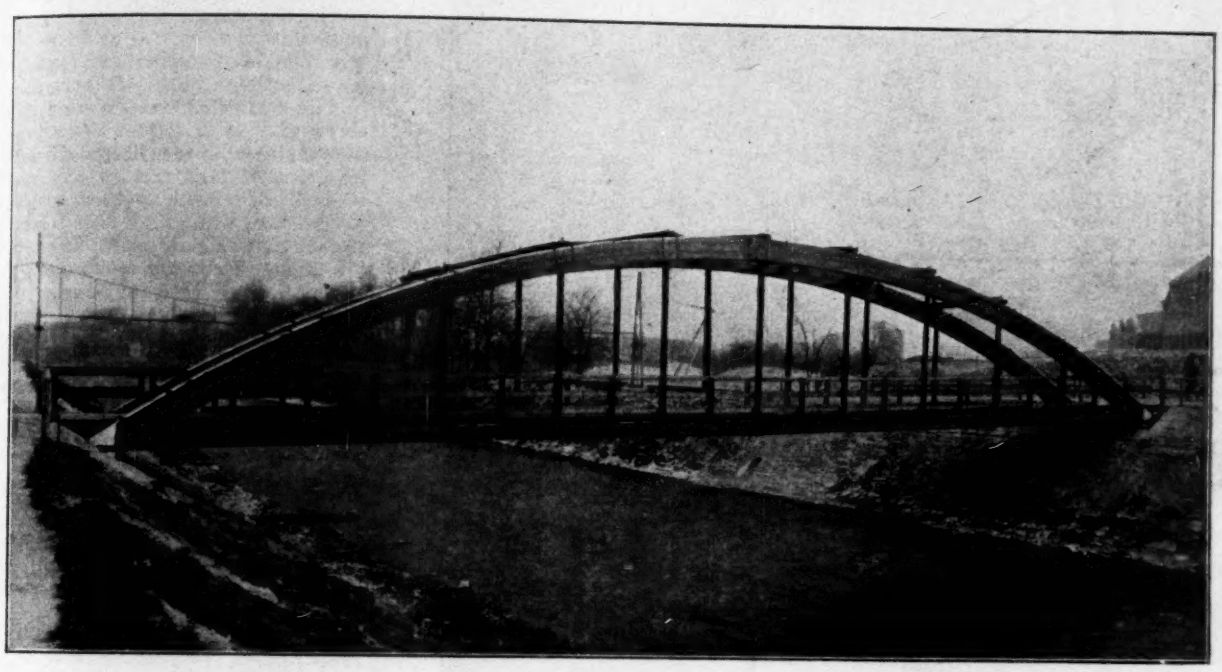
MONTHLY REVIEW *of* CONSTRUCTION.



Wooden Bridge.

A NOVEL TYPE OF TIMBER CONSTRUCTION.

BY OUR BERLIN CORRESPONDENT.

AFTER the remarkable achievements made in the field of timber construction from the XVIth to the XVIIIth century, both from an artistic and engineering standpoint, the rapid advances of iron construction during the last century resulted in a corresponding decline in the use of wood. The general attention of engineers and architects was centred nearly exclusively on iron structures, and timber construction was left in practically the same empirical condition as during the Middle Ages.

There are doubtless a number of constructive problems in connexion with which the use of timber in the place of iron would prove advantageous. This applies in the first place to the use of armoured beams of considerable strength. As long as there was plenty of timber of great dimensions, the carpenter's trade had many ingenious means at its disposal for increasing the bearing capacity of beams (combining several individual beams, united by toothing, etc.), all of which, however, entailed a considerable waste of material.

Mr. Otto Hetzer, of Weimar, claims to have succeeded in placing timber construction on as solid a footing as iron construction, by substituting strictly scientific processes for the crude empirical methods so far in use. His task consisted of investigating the constructive and statical advantages of timber so accurately as to make its use really economical. To this effect the cross-sections of beams (similarly to the case of riveted iron structures) had to be carefully adapted to actual stresses, which could only be done by a composite beam with variable cross sections in each given portion.

The first step in this direction consisted of designing a special glue, capable of forming an inseparable whole out of a number of composite parts, independently of any outside influences. After many years of systematic work he finally succeeded in perfecting a mixture, the gluing power of which (as far as its rapidity of binding, resistance against atmospheric influences and increasing hardening were concerned) perfectly corresponded to any requirements of the case.

The first important application of this glue to the inventor's theory is his *compound beam* with parabolical core.

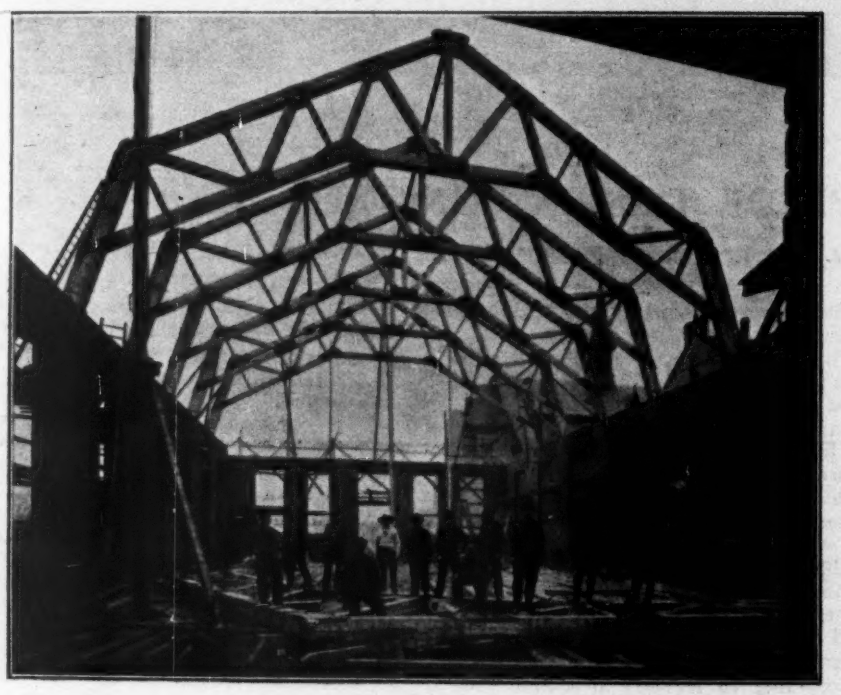
In view of the increasing scarceness of big trunks, more and more difficulty is experienced in spanning considerable distances with timber called upon to carry any material loads. Now the advantage of the compound beam consists of imparting to the timber an increased carrying capacity without any surplus of material, thus allowing beams of small cross-sections to be used in connexion with relatively considerable spans and loads.

According to Navier's deflection theory, bars submitted to bending stress are exposed to the maximum admissible tension only in the outside fibre layers, whereas the central portions, in the neighbourhood of the neutral zone, are submitted to practically no stress. Now, as in a timber beam cut out of a trunk, the more resistant wood fibres are just situated in the centre, whereas the outside rings, submitted to the greatest stresses, are the most recent and less substantial, such beams, when submitted to deflection stresses, could not possibly give satisfaction.

The Hetzer "compound" beams are composed of three longitudinal layers, the uppermost of which is of a wood, characterised by a particularly high compressive strength (such as red beech), and the lowermost of a wood of great tractive strength (such as pine), whereas the central portion does not need to be of any specially resisting material. The inventor was led eventually to impart to the central wood an upward parabolical curvature, so that in the central cross-section, submitted to the highest stresses, the whole of the deflection thrust is dealt with by this parabolical core and the lowermost layer. The core thus constitutes a body of practically constant deflection strength, the upper wedge-shaped pieces only serving to make the surface straight. Tests made at the Royal Testing Institute of Charlottenburg have shown the

Railway Hall, Brussels Exhibition.

Gymnasium, Essen.



Gymnasium, Leipzig.

parabolical wooden core 2½—3 in. in thickness particularly to increase the bearing power of the beam, the more so, as this core, acting as it were as strut-frame, materially adds to the rigidity of the structure, while reducing to a remarkable extent the deflection of the beam. Owing to the high mechanical thrusts, acting both during the manufacture of the beam and subsequently on its being submitted to inflection strain, the wooden fibres or annual rings of the oblique portion are bound to penetrate into the fibres of the central core, thus combining most intimately the various parts of the beam by purely mechanical means and augmenting the friction between the contact surfaces, which greatly adds to the effectiveness of the glue. By a slight upward bend the deflection of the beam can be practically eliminated, a horizontal surface being obtained as soon as the load is applied.

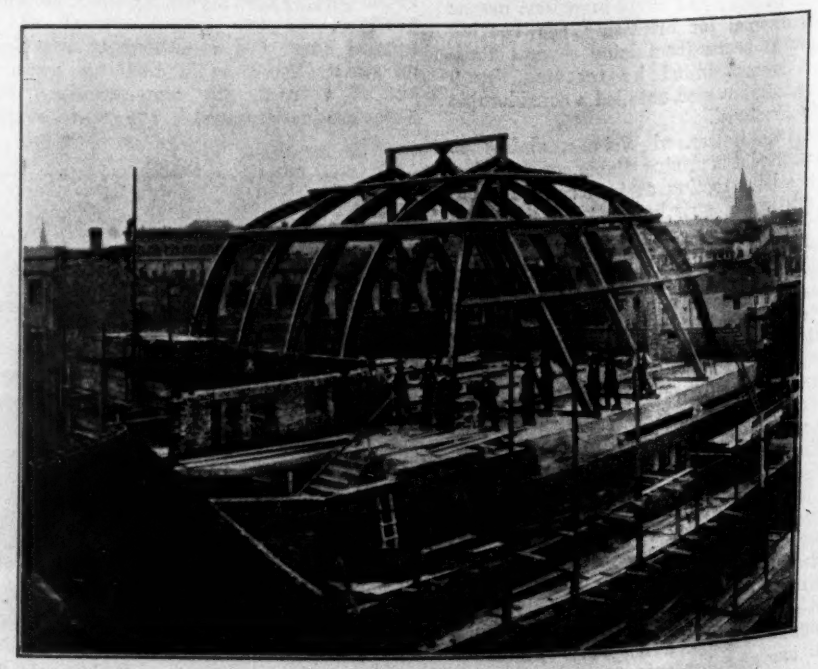
Another even more important application is made of the new method by using it for the production of bent constructive members consisting of timber. Whereas previous wood-bending methods were mainly based on chemical processes, liable to destroy the fibre and available only in the case of small dimensions, Mr. Hetzer produces by purely mechanical means trusses of considerable dimensions which are remarkably resistant to deflection, all the statical stresses being taken into account most accurately. The various wooden layers are joined together with the same refractory glue, which even allows small fragments to be used for the inside core, so that the waste is reduced to a minimum.

A double T-section—the most suitable for deflection stresses—is generally chosen in this connexion, the same as in the case of rolled iron or riveted plate trusses, and the engineer is at liberty to adapt the inflection of the truss to any profile prescribed, cross-sections being calculated in accordance with the stress corresponding to each point. Such points as have to stand the highest loads are reinforced by wooden layers inserted between flanges, where the whole cross-section is solidly encased in substantial iron bows. The trusses either reach down as far as the ground, being anchored directly on the foundation, or are located on high outside walls. In the latter case counterforts or iron ties or bars are required for dealing with the thrust of the vault.

This new method of timber construction is applied most extensively to the manufacture of arched rafters, for the roofing of small buildings, in connexion with which the architect is in a position freely to choose the profile of the roof.

These rafters are mostly of a rectangular cross-section, being reinforced at any point of their length; playing at a time the respective parts of rafters, purlins, and trusses, they should be calculated and dimensioned in accordance. They are placed at 20—30 in. apart, and serve directly to support the square laths.

Constructive parts manufactured on the Hetzer process have been repeatedly submitted to strength tests by the official German testing institutes. In connexion with forces acting at right angles to the glued surface, rupture was always produced within the wooden fibres, the glued joint being left intact. Compound timber structures could also be left in the open for many months and even more than a year, being exposed to all sorts of atmospheric influences, without even the slightest alteration in their joints. The strength was found to be on an average 30 per cent. more than the strength of ordinary wooden structures. The higher manufacturing cost is more than made up for by the saving in material, so that the average cost is distinctly lower than in connexion with the ordinary method. The advantages, especially in the case of rafters, are the more marked as the spans and effective loads are greater.



A Theatre Roof.

Another important feature of the Hetzer system is the possibility of making the structure nearly fireproof, by applying to the beams a fireproof plastering. If the floor-planks be likewise coated with some suitable material, the new system allows the risk of roof-fires to be considerably reduced.

In manufacturing those compound beams, special care should be taken to select absolutely dry timber, eliminating any risk of shrinkage and additional strains. The glue should be applied in a closed room at a minimum temperature of 4° Centigrade.

THE NEW MUNICIPAL BUILDING, NEW YORK.

SITUATED at the junction of Park-row, Center-street, and Duane-street, not far from the Brooklyn Bridge, the building described in this article will provide accommodation for the various municipal departments of New York which at present are in temporary quarters, like some branches of the London County Council.

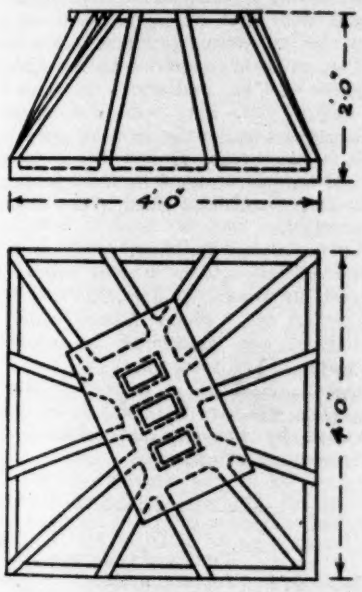


Fig. 1.

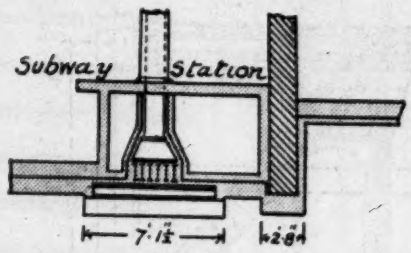


Fig. 2.

As may be seen from the view, the building includes twenty-five stories up to the main roof, in addition to fifteen stories in the central tower, and a two-story basement below ground-level. In plan the building covers a six-sided area, measuring about 375 ft. by 165 ft., but the two basement stories cover considerably more ground, and will afford space for the construction of a station on the Rapid Transit Subway. Chambers-street, passing diagonally through the middle of the building, will be covered by an arch of 40 ft. span with the crown just beneath the fourth story. The general arrangement is made sufficiently clear by the typical plans reproduced.

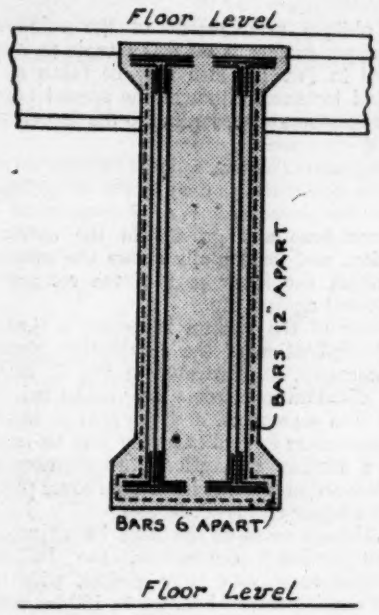


Fig. 3.

Referring to the vertical section, it will be observed that the basement stories extend 5 ft. below street level, the main roof being at the height of 357 ft. above the same level, and the central tower rising to the further height of 203 ft., making the total elevation above foundations equal to 615 ft.

The sub-basement is devoted to the railway station, in connexion with which are various curved tracks involving some interference with the symmetrical arrangement of columns, and a special system of large girders in the floors above for support of the superstructure. The upper basement floor will be occupied chiefly by halls, passages, and stairs for the use of railway passengers. The basement stories also provide space for the installation of mechanical plant, and for storage purposes.

Above street level, the building will comprise public rooms and offices, the construction up to the fortieth floor being of the fire-protected steel cage type, the enclosing walls faced with granite, and the main steelwork cased in brick, terra-cotta, and concrete, according to position. Beyond the fortieth story, the tower will be continued in the form of a masonry lantern, 35 ft. high by 25 ft. diameter, to be surmounted by a statue 25 ft. high.

The total weight of the building, including the weight of its contents, and due allowance for the effects of wind pressure, is estimated at 330 million pounds, the whole of which will be carried by riveted steel columns.

The foundations for this gigantic building constitute a graphic object-lesson of the elaborate and important works necessary for the safe support of the lofty structures now common in most American cities. In the original specification it was provided that the columns should be based upon concrete-filled caissons sunk to solid rock, but as rock is not encountered along the northern side of the site nearer than about 200 ft. below street level, it was afterwards agreed that thirty-eight of the caissons should be sunk to the depth of about 77 ft., where they find a bed of compact sand, to which the loads will be transferred at the rate of 6 tons per square foot. The remaining caissons are sunk through water, quicksand, and gravel to solid rock at the maximum depth of 140 ft. below street level.

As the Municipal Building is in the immediate vicinity of the Brooklyn Bridge terminal, the Hall of Records, and the World Building, all with comparatively shallow foundations on sand, the responsibility attaching to the design and execution of these foundations was naturally very great,

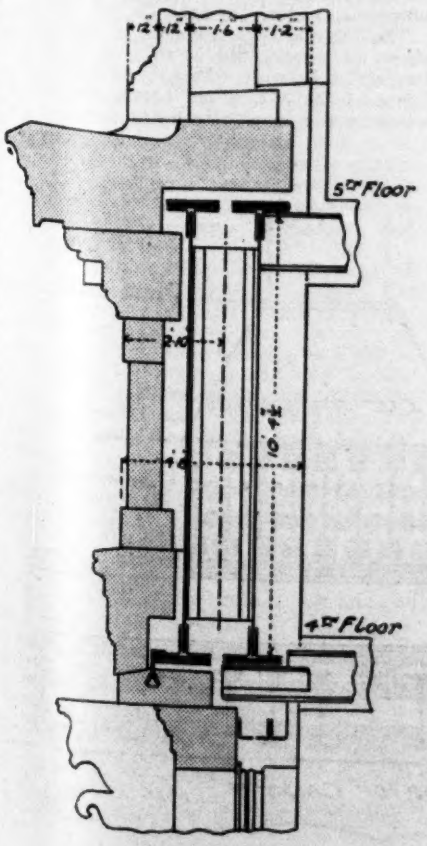


Fig. 4.

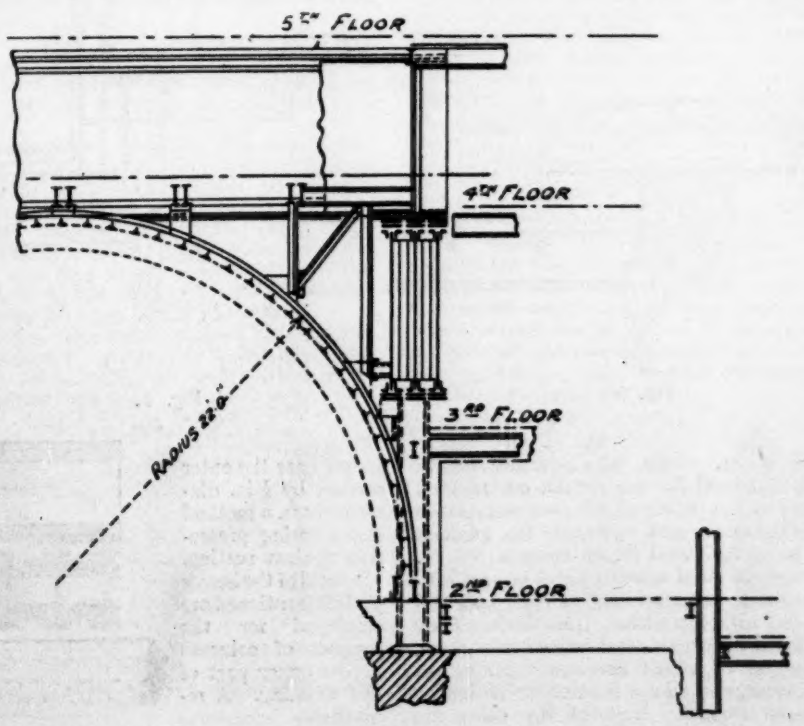


Fig. 6.

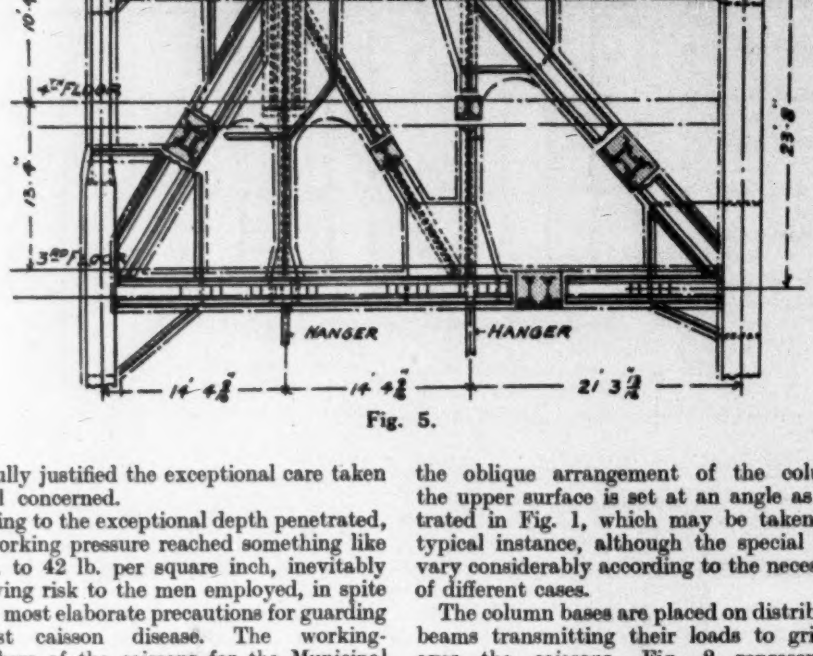


Fig. 5.

and fully justified the exceptional care taken by all concerned.

Owing to the exceptional depth penetrated, the working pressure reached something like 40 lb. to 42 lb. per square inch, inevitably involving risk to the men employed, in spite of the most elaborate precautions for guarding against caisson disease. The working-chambers of the caissons for the Municipal Building were made of reinforced concrete with the exception of ten in timber and sixteen in steel. The largest caisson measures 31 ft. by 26 ft. in section, and carries five columns with the aggregate load of nearly 5,000 tons.

Owing to the great depth attained, the skin friction on the caissons reached about 650 lb. per square foot, and to overcome this, enormous loads were necessary, amounting in some cases to nearly 1,000 tons made up of cast iron blocks. The caissons were filled with concrete in the proportion of 1 : 2 : 4, mixed wet.

The magnitude of the foundation works, and the need for prompt execution, were responsible for the employment of from 800 to 900 men, and an extensive installation of plant, including steam boilers and engines with the collective capacity of over 1,200 horse-power, air-compressing machinery, pumps, cranes and hoists, concrete-mixers, and other appliances. One novel feature of the plant was a sump sunk to the depth of 75 ft. below street level for the removal of subsoil water, which was pumped up to foundation level for use by the contractors.

Many of the principal columns carry loads of 1,000,000 lb. and upwards, the greatest load being 5,475,000 lb. on column No. 73, with the sectional area of 521.5 sq. in. All the columns are machined at each end and provided with cap plates, $\frac{3}{4}$-in. thick. They are placed upon cast steel or cast iron bases, the largest of which measure 6 ft. sq. at the bottom, and all are finished at the top by a planed surface. Most of the bases are symmetrical, but in several cases, owing to the oblique arrangement of the columns, the upper surface is set at an angle as illustrated in Fig. 1, which may be taken as a typical instance, although the special bases vary considerably according to the necessities of different cases.

The column bases are placed on distributing beams transmitting their loads to grillages over the caissons. Fig. 2 represents a column base and grillage in the Subway station, and incidentally shows the manner in which the lower part of the column is protected against fire.

Some of the column loads are so heavy that duplication of the distributing girders is necessary, as illustrated in Fig. 3, where the distributing girders are connected by cast iron separators, and the grillage beams by separators formed of piping and tie-bolts. As a further precaution, the distributing girders are provided with double cover plates on the upper and lower flanges.

Although most of the floor beams are of quite ordinary dimensions, the building contains some very large girders, with the web ranging from 44 in. up to 120 in. deep. One of the triple plate girders parallel to Chambers-street is built up of three web plates, 124 in. deep by $\frac{7}{8}$ in. thick, each with four 6-in. by $\frac{7}{8}$-in. flange angles, six 16-in. by $\frac{7}{8}$-in flange cover plates, and two 122-in. by $\frac{5}{8}$-in. web stiffening plates. Fig. 4 is a section showing the fire protection of two large girders by means of concrete, reinforced near the outer surface by $\frac{1}{4}$-in. diameter bars, a method also insuring protection against rusting.

Several of the heavy girders mentioned are employed for the support of columns in the upper part of the building. A remarkable structural member applied to the same purpose is the truss, of which a drawing is reproduced in Fig. 5. This member is 50 ft. long from centre to centre of the main columns, and 26 ft. deep over all. Extending from the third to the fifth story, it carries two loads of 3,204,000 lb. and 1,029,000 lb., respectively, concentrated at two points. The truss is protected against fire by a casing of concrete, filling all interior spaces, and being of the minimum thickness of 3 in. outside the projecting parts of the steel-work.

Fig. 6 is a drawing which shows the construction over Chambers-street between the second and the fifth stories, the arch being added for architectural effect.

Fig. 7 is a section typical of the girder and masonry construction in the principal façade of the building, and Fig. 8 represents the cantilever arrangement for carrying the heavy masonry cornice and parapet projecting several feet at twenty-fifth floor level.

All beams, girders, and trusses projecting beyond floor and ceiling surfaces are protected by concrete. Columns below street level are cased in concrete with the minimum thickness of 4 in., and above the same level by hollow tile, also with the minimum thickness of 4 in., except in a few cases where brick is employed. Hollow tile is used for most of the partitions, 4 in. thick for heights up to 18 ft., and 6 in. thick where that limit is exceeded.

The important building, of which a few particulars are given in this article, was designed by Messrs. McKim, Mead, & White, architects, with whom Messrs. Purdy & Henderson are associated as consulting engineers. The total cost is stated at 1,800,000*l.*, and it is estimated that its completion will save 90,000*l.* per annum now expended by the city authorities in rent for temporary offices.

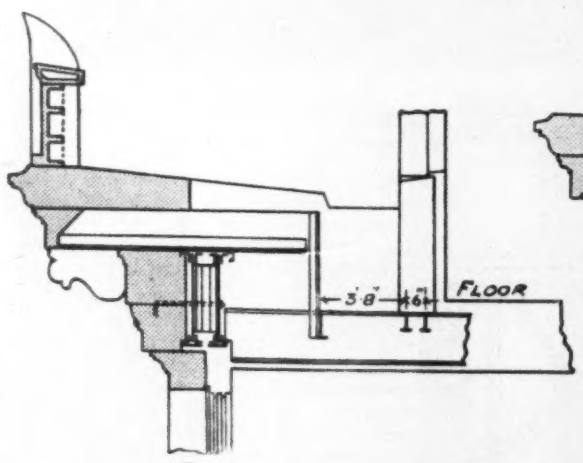


Fig. 8

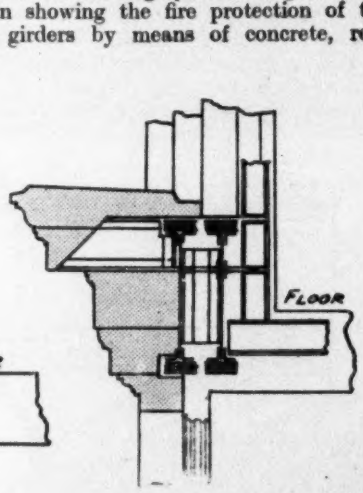
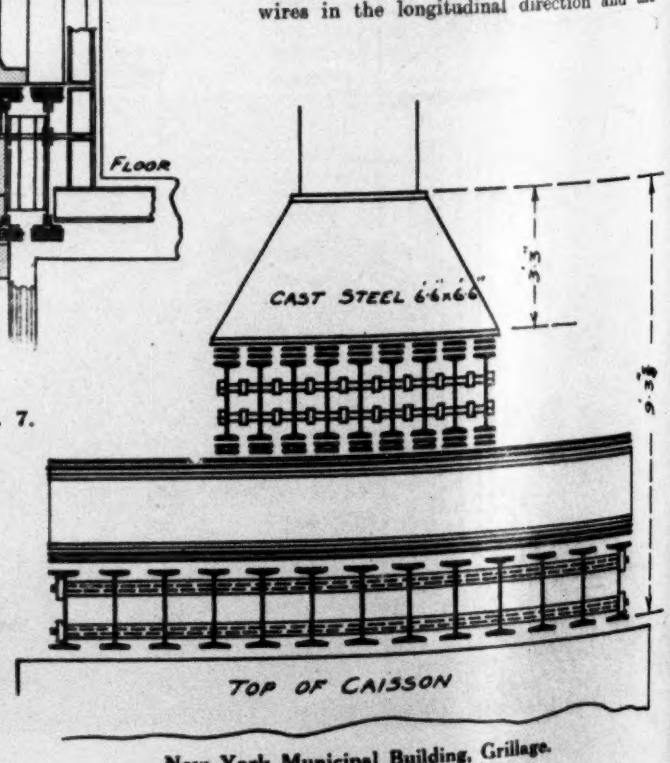


Fig. 7.



New York Municipal Building, Grillage.

Johnson's Steel Wire Lattice System of Reinforced Concrete.

THE main feature of the Johnson system of reinforced concrete is a special type of wire netting with rectangular meshes. The wire employed is of steel with the ultimate tensile strength of about 40 tons per square inch. During the process of lattice manufacture the wire is drawn through a die which incidentally serves the purpose of testing the reliability of the wire.

The Johnson lattice is made in the form of sheets or panels, and in rolls up to 300 ft. long and 6 ft. wide. Figs. 1 and 2 show two forms of the lattice, one having the thicker wires in the longitudinal direction and the

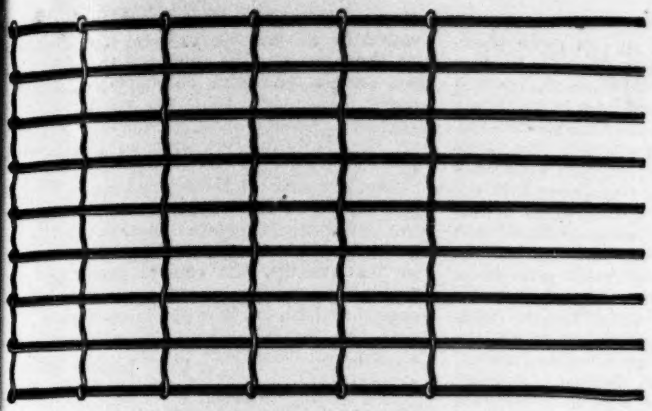


Fig. 1. Lattice with greatest strength parallel to length of roll.

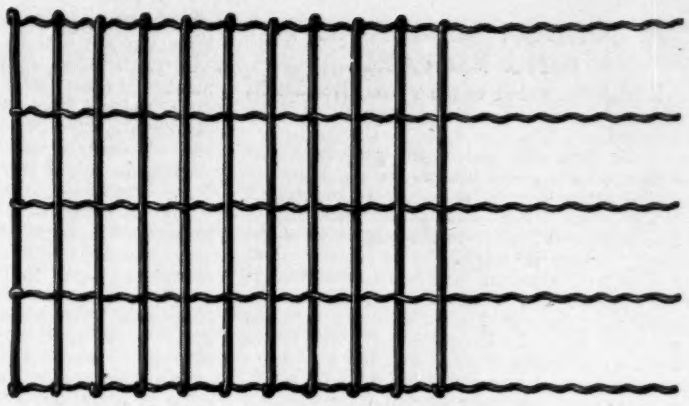


Fig. 2. Lattice with greatest strength transverse to length of roll.

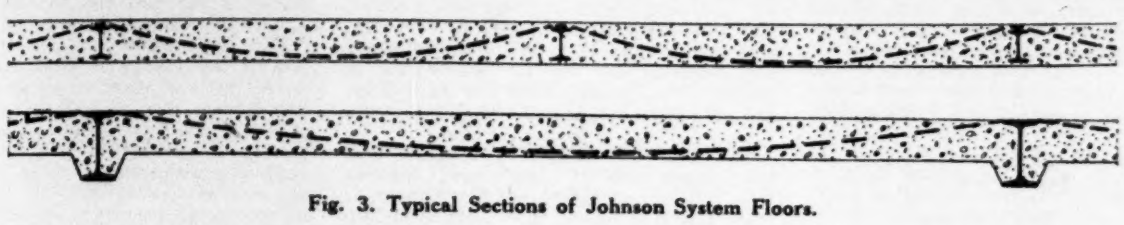


Fig. 3. Typical Sections of Johnson System Floors.

other having the thicker wires transversely to the length.

Being available in sheets of great length, the lattice can be laid continuously from end to end of a building in floor construction, thereby obviating the necessity for joints and overlapping. It is stated by the makers that the cost of laying is not more than about ¼d. per square yard, and that the saving of metal effected by the employment of continuous sheets amounts to from 2½ to 5 per cent.

Fig. 3 contains two typical floor sections, where it will be seen that the lattice is disposed in a series of curves, one for each span of a continuous floor, which obviate the necessity for the customary tension bars or strips over the supports, as well as the need for web reinforcement. In addition to the natural adhesion bond between the concrete and the steel, this form of lattice provides an excellent mechanical bond.

In the latest edition of their catalogue Messrs. Richard Johnson, Clapham, & Morris describe and illustrate various works executed in accordance with their system. Among these are floors in cottages, club premises, school and factory buildings, decking in subway, pier, railway-station, and bridge construction, and one example of a circular tank. The makers point out that the meshes of their lattice can be varied in accordance with requirements, and additional or stouter wires introduced as may be necessary. Another feature to which attention may be directed is that the lattice provides a certain means of ensuring the disposition of tension reinforcement at predetermined intervals of 2, 3, 4, or more inches apart, thus absolutely eliminating all possibility of errors which might otherwise result from the carelessness or oversight of labourers, foremen, and inspectors.

In order to facilitate the employment of the lattice by architects and engineers, the catalogue includes tables of standard lattice, with the gauge of wires and the size of meshes, as well as tables showing at a glance the thickness of concrete and the correct weight of lattice necessary to carry uniformly-distributed load from ½ cwt. to 5 cwt. per square foot on slabs ranging from 3-ft. to 15-ft. span.

It is interesting to note that the Johnson lattice has been used on an extensive scale in Australia, South Africa, and other countries where the advantage of mechanically perfect reinforcement is even of more importance than in this country.

A slab was tested in Sydney by Messrs. Robertson & Marks, architects. The dimensions of the slab were 10 ft. 6 in. long by 6 ft. wide by 6 in. thick, the bearing being 6 in. at each end. The concrete was mixed in the proportions of one part cement, two parts sand, and four parts cinders, and was reinforced by lattice with 1½-in. by 3-in. mesh formed of Nos. 7 and 11 gauge steel wire.

At the time of testing the age of the slab was twenty-seven days. The following are the loads and the corresponding deflections :—

342 lb. per sq. ft.	.....	¼ in. deflection
684 ,,	.....	1 in. ,,
807 ,,	.....	1¼ in. ,,
930 ,,	.....	1½ in. ,,
1,053 ,,	.....	1⅝ in. ,,
1,176 ,,	.....	1¾ in. ,,

The slab ultimately failed at one end, owing to the subsidence of the brick pier, this mishap causing excessive local strain. However, the results stated above sufficiently indicate the efficiency of the reinforcement.

Foundations for a High and Narrow Building.

SITUATED between a nine-story office building and a three-story fire-station in New York, the structure to which reference is made in this article is 134 ft. high by less than 20 ft. wide at one end and only 22 ft. 3 in. wide at the other. The nine-story building has brick walls founded on timber piles driven in sand, and the three-story building is of brick with ordinary footings.

Trial borings showed that beneath the sand near surface level there was a bed of quicksand about 10 ft. thick, overlying solid rock at the depth of from 24 ft. to 30 ft. from street level. As the basement floor of the new building was intended to be nearly 10 ft. below the same level, the thickness of the material between it and the quicksand could not be more than about 5 ft. Consequently the question of foundations required careful attention.

Timber piles were rejected, owing chiefly to the continued lowering of the underground water level, which would ultimately leave the upper part of the piles dry and result in decay.

Concrete piles were thought inadvisable, because of the probability that the operation of driving would cause injury to adjacent buildings.

Spread footings, consisting of steel beams embedded in concrete, were rejected for the reason that they would be very close to the quicksand and might permit unequal settlement with lowering of the water level.

Therefore pneumatic caisson foundations were adopted, giving an absolutely safe bearing upon solid rock and obviating all construction risks.

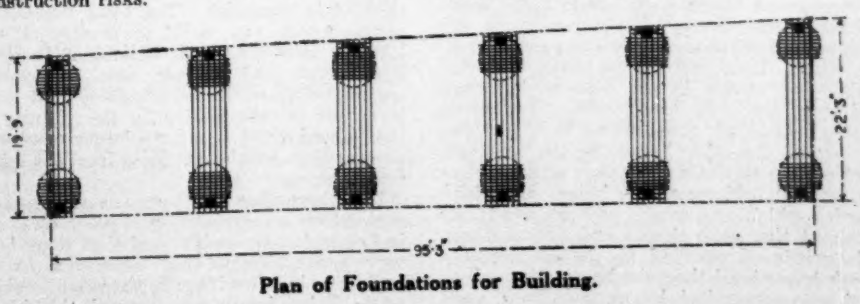
Herewith we give a plan showing the positions of the caissons, their average length being 14 ft. 6 in. and their diameters 5 ft. 2 in. and 5 ft. 9 in., according to position. The total time occupied in sinking the caissons and depositing concrete was 408 working hours, or thirty-four hours for the completion of each pier.

As the face of the caissons is only 9 in. inside the building line, it was necessary to adopt the cantilever system for supporting the main columns. Accordingly a row of 10-in. deep I-beams was laid on top of each pier, and a row of 24-in. deep I-beams connecting two piers, as shown in the plan, where also may be seen the position of the columns. All the beams were connected by separators, and they were embedded in concrete to obviate the risk of corrosion.

The building was designed by Mr. W. C. Hazlett, architect, Mr. J. S. Branne acting as consulting engineer.

Some New Forms of Gas-Fire.

GAS appliances for cooking and for water heating have become almost universally adopted in most large towns; but gas-fires have not attained the same popularity, and a strenuous effort is about to be made to induce householders to use gas-fires more extensively. It is recognised that the forms of gas-fires hitherto used have not been entirely satisfactory, and a number of improved forms of fire are now being placed on the market. The fire which cannot be taken to pieces and cleaned without the aid of a gasfitter and his tools is likely to soon become obsolete. The new form of fire can readily be taken to pieces and cleaned by the consumer himself without the aid of any expensive tool; and the blocks of fireclay fuel, which used to break to pieces and fall down upon the burner nozzles, have been replaced by fuel shaped in the form of a column and held in position by a locking arrangement. Firebars are, therefore, no longer necessary, and the whole front of the incandescent fuel is visible to the eye. One of the new forms of fireclay fuel is reinforced with nickel-steel wire, so that even if a column of fuel breaks in two or three places the fuel still retains its columnar form. It is claimed that a greater radiant efficiency is obtained with these new fires.



Plan of Foundations for Building.

A LONDON MEMORIAL TO KING EDWARD.

A CORRESPONDENT to the *Times* gives details of an extensive London Memorial to King Edward :—

"The first essential of the project is the building of a great bridge for all kinds of traffic in the place of the present Hungerford Bridge, and the consequent removal of Charing Cross Station to the other side of the river. There it might be in much closer and more convenient connexion with Waterloo Station, and would have more room to expand. It would also be on a far less expensive site than the present one, and might have a convenient opening into the Waterloo-road. When it was removed, with its hotel, a great road might be opened from Charing Cross, crossing the river by the new bridge, and, after passing over Belvedere-road, sloping down to York-road, at which point all the traffic from the south could enter it. Needless to say, there would be on each side of the northern part of the new road some of the finest sites in London; and upon these stately buildings could be erected that would produce an enormous income. But what of the south side of the river? If the new bridge led to the southern shore in its present state, it would still lead to a bathos—indeed, to a prospect of mud and ugly warehouses. Here is a further opportunity for a vast improvement that will make a worthy memorial to King Edward. Just north of Westminster Bridge, on the south side of the river, the new County Council Hall is now in process of erection, but beyond it there is still the mud and the warehouses, which will remain in violent and incongruous contrast with the new building. If there is to be a worthy entrance for the new bridge on the southern side, there must be an end of these as far as Waterloo Bridge; and, instead of them, where the mud now is, we can imagine an embankment of public gardens, with a façade of stately buildings behind them, stretching one way as far as the County Council Hall and the other as far as Waterloo Bridge. It would cost money, of course, a great sum of money. But there would also be a vast increase, not only in the beauty and convenience of London, but also in the value of the site. If such a scheme were carried out, it would, of course, have to be carefully planned and well executed. In fact, it would be the first great opportunity for putting in practice those principles in town planning which have lately been so clearly stated at the Conference. The bridge itself must be a fine piece both of architecture and of engineering, and all the new buildings, north and south of the river, must be worthy of it."

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held at the County Hall, Spring-gardens, S.W., on Tuesday. Mr. Whitaker Thompson, the Chairman, presided.

LOAN.—Sanction was given to the Paddington Borough Council to borrow 3,000*l.* for repaving works in Bayswater-road.

TABARD-STREET SLUM AREA.—A Report was presented by the Housing of the Working Classes Committee recommending the clearance of the Tabard-street and Grotto-place and Crosby-row slum areas. The Report stated that the Tabard-street area is about 13½ acres in extent, contains 649 houses, and has a population of 3,552 persons, nearly all of whom are persons of the working class. The characteristic feature of the area is the narrowness of the streets and the bad arrangement of both streets and houses. George-court is, in parts, only 3 ft. wide; Little Britain, 5 ft.; Wickham-court, 7½ ft.; and several other streets do not exceed 10 ft. in width, including the footways. Out of thirty-two streets in the area no less than thirteen are *culs-de-sac*. The houses in Tabard-street are three stories in height, but nearly all the other houses on the area consist of two stories and contain either two or four rooms. Many of the houses have back yards, which are small and in which are situated the water-closets and the dustbins. The yards of some of the houses are at a much lower level than the houses themselves, and are approached by narrow, dark staircases. These yards are very small, and very little sunlight and fresh air can reach them. The front doors of the houses in a large number of cases open directly into the ground-floor room. The ground floor in many instances is some inches below the street level, and the ceilings are low-pitched, the rooms varying in height from 6½ ft. to a little over 7 ft. The houses generally are worn out; the walls of many of the ground-floor rooms present evidence of dampness or have been matchboarded in such a way as to conceal the dampness; and the staircases are, in a number of instances, narrow, dark, and dangerous. The whole of the area is populated by a very poor class, many of the inhabitants occupying cheap furnished rooms.

The Grotto-place area, which comprises some 1½ acres, lies to the west of Southwark Bridge-road, and includes a number of badly-arranged courts, most of which are *culs-de-sac*, and some houses in Great Suffolk-street. The area contains 138 houses, all of which, with the exception of those fronting on Great Suffolk-street, are one or two stories in height. The houses, with few exceptions, are quite worn out, and the inhabitants, who number 567, are of the poorer class.

The Crosby-row area, which is situated on the eastern side of Crosby-row, between Snow's-fields and Long-lane, Bermondsey, is about 1 acre in extent, and contains eighty-eight houses occupied by 474 persons, most of whom are very poor. The houses in Crosby-row are two and three stories in height, and a few have basements. Nearly all the other houses on the area are two stories in height and contain two, three, and four rooms. The houses generally are worn out, are surrounded by high buildings, and have insufficient space about them. Many of them show signs of dampness, or are matchboarded in such a way as to conceal the dampness.

The death-rate from all causes of mortality in the Tabard-street area was more than twice that of the metropolitan borough of Southwark, which was in the same period considerably above that of London as a whole. The Grotto-place and Crosby-road areas are small for the calculation of reliable death-rates, but the figures that have been obtained show that in the former area the death-rate from all causes was more than twice that of Southwark. The death-rate from all causes in the Crosby-row area was more than one and a half times that of Bermondsey.

The Medical Officer had reported that the areas undoubtedly required to be dealt with by an improvement scheme, and as a result of a very careful consideration of all the aspects of the question the Committee were strongly of opinion that nothing short of the demolition of all the old houses and the complete rearrangement of the streets will suffice to remedy the sanitary defects in the areas. As regards the Grotto-place and Crosby-row areas, although the Council has previously felt a difficulty in dealing with these areas separately on account of their limited size, the Committee thought that if it was decided to proceed with a scheme for the clearance of the larger (Tabard-street) area the opportunity should be taken of reconstructing the two smaller areas at the same time. The Committee had, therefore, caused to be prepared a draft scheme under Part I. of the Housing of the Working Classes Act, 1890, for dealing with all three areas.

In order to decide the amount of new accommodation which the Council should provide on the areas themselves, inquiries were made to ascertain the number of vacant working-class rooms in the neighbourhood. The total number of houses and tenements found to let in the whole area was 1,784, containing 5,977 rooms, of which 1,807 may be described as in good condition and 3,707 as in fair condition. The total number of empty rooms, viz., 4,764 in Southwark and 1,213 in Bermondsey, is equivalent to about 5 per cent. and 3·5 per cent. of empties respectively, and it would appear that there is vacant accommodation in the vicinity of the Tabard-street area for a larger number of persons than will be displaced from the represented areas.

The Committee had been advised that the demand for accommodation in block dwellings in London is decreasing, and that there is no very great demand for tenements in the ordinary block dwellings in the neighbourhood of the Tabard-street area. In all the circumstances the Committee considered that it would be inadvisable to erect new dwellings on the cleared sites sufficient to rehouse all the people who will be displaced, and expressed the view that the requirements of the case will be met by erecting dwellings on the Tabard-street area to accommodate 2,450 persons.

The adoption of these proposals will result in a considerable amount of surplus land, and the Committee suggested that, in view of the great need for additional public open space in the locality, the central portion of the Tabard-street area, about 5 acres in extent, should be laid out as a public open space, and that the requisite rehousing accommodation should be provided in five-story balcony block dwellings overlooking the open space, which would, however, be open to the road on two sides. The remainder of the Tabard-street area, comprising about 3 acres, and the whole of the two smaller areas should be utilised for commercial purposes.

The expenditure involved in the execution of the scheme as proposed is estimated as follows:—Tabard-street area, 394,600*l.*; Grotto-place area, 47,600*l.*; Crosby-row area, 31,100*l.* The total gross cost of the scheme would, therefore, be 473,300*l.*, but after deducting estimated value of surplus lands and rehousing sites the total net cost of the scheme would amount to 387,700*l.*

The cost of erecting dwellings to rehouse the persons of the working classes who will be displaced is dependent upon the decision of the Local Government Board as to the number of persons to be accommodated. The Committee's proposal to rehouse 2,450 persons on the Tabard-street area would involve expenditure approximately estimated at 116,375*l.*, and in the event of the Council itself providing the dwellings a further estimate on capital account will be necessary.

Major Boscawen, the Chairman of the Committee, described the neighbourhood as a plague-spot and a danger to the whole of London. To speak of rehousing the people who would be displaced was to some extent a misnomer, because those who were displaced were not as a rule those who took advantage of the new accommodation provided. Instead of attempting to rehouse all those displaced, the Committee suggested taking a middle course and to ask for powers for a building scheme to accommodate half those displaced. With regard to the proposed open space, he pointed out that there was no open space within a mile and a half on either side of these areas.

Sir John Benn said that, while his party were anxious to see such improvements carried out, they did not want to subsidise the slum-owner. They did not wish to pay people who ought really to be punished. If the scheme were kept back for a year or two it would come under Form IV., with the result that a good deal of the land involved would be scheduled at the valuation which the landlords had given it when they desired to escape taxation. He believed that if this course were adopted it would reduce the cost of the proposed improvements by 100,000*l.* But he did not dare to take the risk of postponing the work of dealing with this terrible district, and he would therefore support the scheme.

After a long discussion, in the course of which members of both parties expressed hearty approval of the scheme, the Report was carried.

MINOR SCHOOL IMPROVEMENTS.—The Education Committee recommended :—

That expenditure on capital account of 400*l.* in respect of taking out and lithographing quantities, and of professional charges, in connexion with the structural improvement of the Lyham-road school, Norwood, be sanctioned.

That expenditure on capital account of 649*l.* in respect of the incorporation of additional land in the York-road site, Islington, W., and the rebuilding of the girls' and infants' offices be sanctioned.

That expenditure on capital account of 320*l.* in respect of taking out and lithographing quantities, and of professional charges, in connexion with the structural improvement of "Peckham-park" school be sanctioned.

That expenditure on capital account of 1,055*l.* in respect of the enlargement of 128 places of the Fairclough-street school, St. George-in-the-East, be sanctioned.

That expenditure on capital account of 325*l.* in respect of the enlargement of the boys' playground at the Old Woolwich-road school, Greenwich, by the incorporation of additional land, and the rebuilding of the boys' offices, be sanctioned, and that the work be executed by Messrs. W. Johnson & Co., Ltd.

That expenditure on capital account of 293*l.* in respect of the enlargement of the girls' and infants' playground at the Camden-street school, St. Pancras, E., and the provision of a new cloakroom for the infants, etc., be sanctioned.

That expenditure on capital account of 237*l.* in respect of the enlargement of the boys' playground at the Scrutton-street school, Hoxton, by the incorporation of additional land be sanctioned.

WOOD-BLOCK FLOORING CONTRACTS.—It was decided that the seal of the Council be affixed to the contracts with Messrs. Hollis Brothers & Co. and the Acme Flooring and Paving Company (1904), Ltd., for wood-block flooring work at certain schools, and also to their contracts for carrying out, for a period of three months, repairs to wood-block flooring in L.C.C. schools generally.

ALTERATIONS TO THEATRES, ETC.—The Theatres and Music Halls Committee reported that they had approved drawings for the following:—

Adelphi Theatre, Strand—provision of a water-closet at the stalls level, and the ventilation of the pit and stalls bars and the pit sanitary conveniences.

Concert-hall and Rink, The Avenue, Blackheath—formation of a new entrance on the western side.

Crossway Central Mission, New Kent-road—provision of a cinematograph-chamber and a film-winding room.

Hammersmith Broadway Skating Rink, 15 and 17, Brook Green-road—alteration in the main entrance.

Holborn Cinema, 210 and 211, High Holborn—alterations to the sanitary arrangements.

Shaftesbury Theatre, Shaftesbury-avenue—provision of additional draught doors to the amphitheatre, and alteration of the door to the cloak lobby.

The Committee also reported that they had considered the following, which they recommended should be approved subject to certain conditions:—

A drawing, submitted by Messrs. Homer & Lucas, showing a cinematograph hall proposed to be erected in Coldharbour-lane, Brixton.

Drawings, submitted by Messrs. F. Matcham & Co., showing a music-hall proposed to be erected on the site of Nos. 444 and 446, Fulham-road, and to be known as the Fulham Empire.

Drawings, submitted by Messrs. G. Billings, Wright, & Co., showing a theatre proposed to be erected at 226, Commercial-road, and to be known as the Oriental Theatre.

A drawing and a specification, submitted by Messrs. Doyle, Devonshire, & Co., of alterations proposed to be made to the Rutland Hotel, 15, Lower-mall, Hammersmith, in order to render the billiard-room on the first floor suitable for occasional concerts, etc.

Drawings, submitted by Messrs. Kirk & Kirk, showing extensive alterations proposed to be made at the Surrey Vaudeville Theatre, Blackfriars-road.

Drawings, submitted by Mr. H. M. Theobald, showing a proposal to extend the Gaiety Picture Palace, 22, Tottenham-court-road.

The Council approved the recommendations of the Committee.

MONUMENT TO ELIZABETH FRY.—The Local Government, Records, and Museums Committee reported that an offer had been made by Mr. Walter Runciman, M.P., on behalf of a friend who wishes to remain anonymous, to present to the Council, as a gift to London, a monument to Elizabeth Fry. The donor desires that the statue should be erected in the centre of Millbank Garden, which lies between the back of the Tate Gallery and the Council's buildings, and forms part of the site of the Millbank Prison. The statue will be by Mr. Alfred Drury, A.R.A., and is to be cut rather larger than life size from one block of white marble. The figure will be in Quaker dress, and placed on a suitable base. It was decided to accept the gift.

THE INSTITUTE OF BUILDERS: THE DEVELOPMENT OF ENGLISH BRICKWORK.

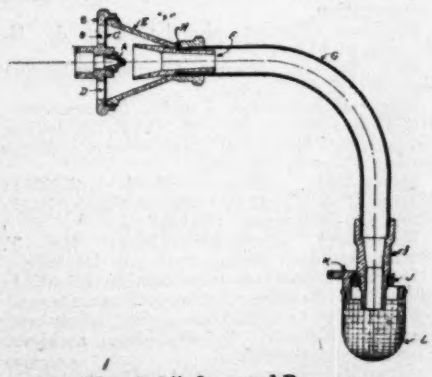
THE second of a series of lectures arranged by the Council of the Institute of Builders took place at their premises at Koh-i-Nor House, Kingsway, when Mr. H. Franklyn Murrell, A.R.I.B.A., delivered a lecture on "The Development of English Brickwork."

The historical progress of the art was illustrated by a fine collection of slides. Amongst other points may be noted:—Brick, as a building medium, is in a secondary place to stone in historical and monumental architecture, but for domestic work possesses charm and colour lacking in the colder material. Roman brickwork in this country shows the typical methods evident in other parts of the Empire. Remains of Roman brickwork are found in many parts of the country; the best Tudor examples are in East Anglia and the Home Counties, the finest Renaissance in the south. Norman remains though evidencing an essentially stone architecture, at Colchester and St. Albans show Roman tiles considerably employed. Shortage of stone and timber compelled a brick manner even in church work in Essex and Suffolk in the XIVth and XVth centuries. In Tudor work this brick manner developed great interest in chimneys, corbelled bands, tracery, vaulting, and diapering, showing often great constructional skill. The first signs of Renaissance influence are visible in terra-cotta work at Sutton Place, Layer Marney, and East Barsham. Early Renaissance brickwork has Flemish feeling, as at Kew Palace, Rye Grammar School, and King's Lynn. Inigo Jones at West Woodhay, and Wren at Kensington Palace and Christ's Hospital initiated a brick style to be the vernacular for the whole of the XVIIIth century. A marked decline followed the Wash period, till the enthusiasm of the Gothic, the Queen Anne, and Byzantine revivals revitalised brick building. Whatever method of construction may determine the course of urban architecture, brick seems likely to remain the building material most suited to express the amenities of English country life.

An appreciation of the lecture was expressed by the Chairman, Mr. F. Higgs, and supported by Mr. J. S. Holliday. Mr. E. J. Brown spoke on Essex brickwork, Mr. W. F. Wallis on rubbed bricks, Mr. C. H. Mabey dealing with brick carving.

INCANDESCENT GAS LIGHTING.

MR. ALFRED MANSFIELD (Messrs Mansfield & Sons, Ltd., engineers, Derby-square, James-street, Liverpool), who is the Consulting Gas Engineer for Calcutta Corporation, has been for some considerable time making inquiries for suitable burners for the lighting of Calcutta. He was unable to obtain one that would suit the requirements of the city of Calcutta, and he has devised a burner which will answer all the requirements laid down by the authorities. These requirements are essentially the following:—That an inverted gas burner should be used, the gas pressure being 2 in. water. The consumption should range from 1 to 4 cubic ft., according to the streets which have to be lighted, and to allow of incandescent lighting throughout the whole place, without having to resort to mixed lighting, viz., flat flame and incandescent. Although the consumptions are in some cases very low, the efficiencies of the burners have to be high, and after many months of experiment these high efficiencies, we are informed, have been arrived at, and at the same time great economies have been effected.



Mansfield's Inverted Burner.

The burner consists essentially of a base plate, a nipple entering the base plate, a mixing chamber at the back of the base plate, a gauze therein, an injector projecting from the chamber, a nozzle or burner proper, and a tube or connexion connecting the nozzle with the conical orifice from the mixing chamber.

As shown, the size of the nipple A governs the quantity of gas that has to be passed through the burner at the point of combustion, the diameter of the nozzle I regulates the required length of flame, and the height of the mantle support gives the amount of mantle surface to be exposed to the heating effect of the burning gas. By, therefore, screwing down the carrier J, the length of mantle exposed to the burning gas can be increased. Any consumption of gas can be arranged for—from ½ cubic ft. an hour upwards to 5 cubic ft.—with the same burner, by simply changing the nipple A, nozzle I, injector F, and mantle, the later of which can be of the ordinary commercial type. By thus making the nipple, injector, and nozzle interchangeable (there being for each a considerable number of varieties), the "very highest efficiency for any kind of gas and any pressure can be secured." It is preferred to have the tube G arranged so that it can be screwed in and out a little by the adjusting connexion H, so as to still further regulate it. But, as the patentee points out, "this is a comparatively small matter, as each tube is made of the right contour for best efficiency."

Attempts have, he continues, been previously made to obtain this result by providing regulating gas nipples, and devices such as a hit-and-miss grid for controlling the primary air supply; but these methods have serious objections when used for such purposes as public lighting, where the adjustment is frequently inadvertently altered by the lamp cleaners. "Consequently, in many places gas burners are rapidly rendered useless by being choked with dust and insects, which are drawn in with the primary air supply. They are also frequently of great annoyance owing to incomplete combustion and consequent noisome smell."

In order to prevent the gas from lighting back at the injector nipple, various forms of gauze and perforated cones have been introduced in the mixing tubes of burners. These also rapidly become choked with insects and dust, and also by the corrosive action of impure gas. With gas burners as at present constructed, the nozzle in which the gas burns is of definite diameter, and the consumption of gas by such a burner is always an unknown quantity. If the burner has been constructed to consume (say) 4 cubic ft. per hour of one quality of gas, it will probably require 5 ft. of a different quality of gas to work successfully.

By the present invention, it is possible to adapt the apparatus to any condition required for lighting, and to any quality of gas. The inventor has found that the flame of the atmospheric burner, when working at its best, gives a clearly defined inner cone of unconsumed gas, which measures twice the diameter of the orifice from which the gaseous mixture is issued; that is to say, if a nozzle is fixed which has an issuing nozzle of 0·4 in. in diameter, and after lighting the gas a measurement is taken from the end of the nozzle to the apex of the inner cone of the flame, this dimension should be 0·8 in. in length. Further, it is found that when used with an inverted mantle, the bottom of the mantle should be three diameters of the nozzle from the end of the latter to obtain the maximum efficiency. In the instance above mentioned, therefore, where the nozzle is 0·4 in. in internal diameter, the bottom of the mantle should be 1·2 in. from the end of the nozzle, and this can be regulated to a nicety by screwing up and down the carrier J.

When a nozzle of the desired aperture has been thus placed in position, the injector F is fitted into the chamber E, and the cone screwed up against the gauze C and the plate B. The gauze now prevents any insects and nearly all dust from entering the air chamber at D. The connexion H is screwed on to the air chamber, and the requisite nozzle is adjusted in place. The mantle must be three times the internal diameter of the particular nozzle from the latter.

A little experience will show the operator exactly what alterations he should now make in the nipple, injector, and the nozzle—all these three being made of numerous sizes, each of which is interchangeable with the others. When, therefore, the operator comes

to fix the burner, he first ascertains (from tables or otherwise) the size of injector F required for the particular purpose under consideration. A nipple which consumes the required quantity of gas at the regular pressure is selected, and experiments are tried with different sizes of nozzles until the proper size has been found to give a cone which has a length of twice the diameter of the nozzle. The burner so adjusted will give the maximum efficiency which can be obtained from the quality of gas available. It will also be found that as the burner is then correctly designed for the quality of gas, there is no danger of lighting back, and no necessity for gauzes or other obstructions being placed in the mixing tube or over the nipple.

LONDON COUNCILS.

Battersea.—Paving works are to be carried out at an estimated cost of 250*l.* The tender of the Acme Flooring and Paving Company (1904), Ltd., has been accepted for creosoted deal blocks required for paving works in Battersea Bridge-road at 7*l.* 3*s.* per 1,000

Brentford.—The District Council has passed a plan lodged by Messrs. Fuller, Smith, & Turner for a cinematograph theatre in High-street, also for alterations to the "Rising Sun" public-house.

Chelsea.—Plans have been passed for Mr. A. P. Killik for the erection of a building on the west side of Shawfield-street.

East Barnet.—Plans have been lodged with the Urban District Council by Mr. T. Osborne for six houses and shops in Capel-road.

Hackney.—Electric mains are to be extended in Springfield and Springfield-gardens at an approximate cost of 100*l.*

Holborn.—The Council have approved plans lodged by Mr. J. J. Burnett for the erection of a building on a site abutting on Wild-court and Keeley-street, Kingsway.

Kensington.—Messrs. A. Roberts & Co., Ltd., are to adapt the present cart shed at Kensal depôt into office accommodation, at a cost of 94*l*

Lambeth.—Plans have been approved as follow:—Messrs. Waller & Co., electric theatre, rear of 200, Upper Kennington-lane and to front Auckland-street; Messrs. Homer & Lucas, electric pavilion, corner of Coldharbour-lane and Brixton Oval; Temperance Billiard Halls, Ltd., billiard hall, Coldharbour-lane, abutting upon Rushcroft-road.

Poplar.—Plans have been approved for Messrs. Parr & Sons for new premises for Messrs. C. & E. Morton at the corner of West Ferry-road and Cuba-street.

St. Pancras.—Alterations are to be made to the Town Hall by providing additional committee-rooms and office accommodation. The estimated cost is 740*l.* The lower part of Kentish Town-road is to be paved by the Borough Council at the expense of the London County Council, in connexion with the reconstruction of tramways, at an estimated cost of 2,466*l.* The Committee of the University College, Gower-street, has applied for the closing of Little Gower-place for the purpose of extending the College buildings.

Twickenham.—Messrs. Brewer, Smith, & Brewer have had plans passed for alterations and additions to Richmond Bridge-parade, Richmond-road.

Watford.—The Urban District Council has passed the following plans:—Mr. D. Eames, four houses, Princes-avenue; Mr. S. Swain, four houses, Hagden-lane; Mr. North, additions to watch factory, Hagden-lane.

Wimbledon.—Streets are to be made up as follow:—Gordondale-road, estimated cost, 377*l.*; Lucien-road, 390*l.*; Mount-road, 583*l.* The following plans have been passed:—Messrs. J. Sullock & Sons, alterations and additions The Hill, Wimbledon Hill-road; Messrs. F. H. Greenaway and J. E. Newberry, new church (St. Peter's), junction of Kohat and Havelock roads. The following plans have been lodged:—Messrs. Ryan & Penfold, eight houses, Durnsford-road; Mr. J. R. Thomson, lock-up shops on site belonging to Messrs. Pool & Co., Alexandra-road.

INTERMEDIATE SCHOOL, CARDIFF.—The new intermediate school for boys in Newport-road, Cardiff, was opened by the Lord Mayor (Alderman John Chappell) recently. The architects were Messrs. Teather & Wilson, Cardiff, and the builder Mr. W. T. Morgan.

CHURCH INSTITUTE, LEICESTER.—The Victoria-road Church Schools and Institute, Leicester, were recently opened. The main part of the ground floor is occupied by the "Edward Wood Hall," a Georgian chamber capable of accommodating 800 people. The architect is Mr. G. Lawton Brown.

COURT OF COMMON COUNCIL.

A MEETING of the Court of Common Council was held at the Guildhall on Thursday last week.

Paving Contracts.—On the recommendation of the Streets Committee it was decided to renew a number of contracts with the Val de Travers Asphalte Company, the Limmer Asphalte Company, the French Asphalte Company, and the Improved Wood Company.

Paving Experiment.—The Streets Committee recommend, and it was agreed, that, by way of trial, the footway of Wood-street be laid with "Corkite," free of cost to the Corporation, by the British Cork Asphalte, Ltd.

Ironmongers' Almshouses and Grounds.—Reporting on a letter from the Mayor of Shoreditch and the Chairman of the Committee for the Preservation of the Ironmongers' Almshouses and Grounds, the Coal and Corn and Finance Committee again recommended that a contribution of 250*l.* be made towards this object. The Council, in spite of an earlier decision not to contribute, adopted the Committee's recommendation.

Repairs, etc., to the Mansion House.—The General Purposes Committee submitted estimates amounting to 1,985*l.* for works and furniture required at the Mansion House during the ensuing Mayoralty. The Court approved.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

ABERDEEN.—Church, Thistle-street (2,000*l.*); Trustees, Plymouth Brethren, Aberdeen.

Amble (Northumberland).—Adaptation of old schools for public offices (850*l.*); Mr. W. Gibson, Surveyor, Amble Urban District Council.

Annesbury.—Police station; Surveyor, Wilts County Council.

Audley (Staffs).—Schools (2,000*l.*); Messrs. Watkins & Adams, architects, Swan Bank, Burslem.

Aylesbury.—Infants' school; Vicar, St. Mary's.

Bacup.—Rebuilding Bull's Head Hotel; Messrs. Baxter, Ltd.

Biddulph.—School and handicraft centre (4,550*l.*); Mr. Thos. Godwin, builder, Victoria-road, Hanley.

Billingham.—Enlargement by 100 places of school; Messrs. J. A. L. Robson and A. J. Dawson, Joint Secretaries, Education Committee, Durham County Council, Durham.

Birmingham.—Christadelphian Hall, Suffolk-street; Mr. G. A. Birkenhead, architect, Caledonian-chambers, St. Mary-street, Cardiff; Mr. W. Bishop, builder, York-road, King's Heath, Birmingham.

Bispham (Lancs).—Electricity generating station, Red Bank-road; Mr. T. Harrop, Surveyor, Bispham-with-Norbreck Urban District Council.

Blackburn.—Institute (3,000*l.*); Trustees, Four Lanes End Congregational Church.

Blackpool.—Opera house; Messrs. Mangnall & Littlewood, architects, 42, Spring-gardens, Manchester.

Blairgowrie.—U.F. Church, Balmoral-road, New Rattray, for the Rattray U.F. Church Congregation.

Bowburn.—Mission church; Mr. J. G. Burrell, architect, Durham.

Bow (Devon).—Mission Church buildings; Rev. W. E. C. Crosse.

Bray.—Enlargement and improvement, Holyport schools; Mr. W. C. F. Anderson, Secretary, Education Committee, Berks County Council, Reading.

Broomfield (Essex).—School (3,565*l.*); Messrs. C. & W. H. Pertwee, architects, Bank-chambers, New-street, Chelmsford.

Broompark (Durham).—School; Mr. T. Coates, builder, Hallgarth-street, Durham.

Bury.—Proposed housing scheme (31,000*l.*); Mr. A. W. Bradley, Surveyor, Town Council.

Caerwent. — Additions, St. Stephen's Church; Mr. G. E. Halliday, architect, Castle-street, Cardiff.

Carcroft.—Stores (1,500*l.*); Doncaster Co-operative Society.

Cargo Fleet (N. R. Yorks).—School; Mr. J. C. Wrigley, Secretary, Education Committee, N. R. Yorks County Council, Northallerton.

Carnarvon.—Hospital (4,000*l.*); the Guardians.

Carnforth.—School; South Lonsdale Education Committee.

Cassop (Durham).—Messrs. Thompson & Dennison, builders, Sunderland.

Chatham.—The Town Council has passed the following plans:—Mission hall, Brook, for the Rector of St. Mary's; rebuilding Nos. 321 and 323, High-street, for Mr. J. Presnail.

Chelmsford.—Extension, main building and workshops, for the Hoffman Manufacturing Company.

Cheshunt.—School; County Surveyor, Herts County Council, Hertford.

Colwyn Bay.—Drill hall, etc., for 5th Batt. Royal Welsh Fusiliers; Mr. B. Lumb, builder, Tedmorden.

Cork.—Premises, Munster and Leinster Banking Company; Mr. A. Hill, architect, 22, George-street, Cork.

Coventry.—School, Stoke (10,000*l.*); Mr. S. N. Cooke, 33, Newhall-street, Birmingham.

Deal.—Bank premises; Mr. W. J. Ballard, builder, Ramsgate.

Derby.—Additions, school (1,500*l.*); Vicar, St. Luke's.

Dover.—Theatre, East Cliff; Mr. Horace Dan, architect, Faversham. Theatre, Biggin-street (3,000*l.*); Messrs. Moody & Gurr, Dover.

Dudley.—The following plans have been passed:—Motor-house, Park-road, for Mr. Josiah Lane; alterations, Castle Hotel, Castle-street; also an electric theatre, High-street, for the Wolverhampton and Dudley Breweries, Ltd.

Dundee.—Extension, King's Cross Hospital (2,100*l.*); Mr. Jas. Thomson, Architect, Town Council.

East Thorpe.—Additions, St. Mary's Church; Messrs. Chancellor & Sons, architects, Duke-street, Chelmsford.

Eccles.—The following plans have been passed:—Fifteen houses, Lansdale-street, and fifteen in Rooke-street, Peel-grove, for Mr. Thos. Eggington; semi-detached houses, Rocky-lane, Monton, for Mr. Alfred Moore.

Edinburgh.—Buildings, corner of West Port and Vennel, for the Salvation Army.

Ellon.—Parish hall (1,000*l.*); Vicar, Parish Church.

Fochriw.—School (250 places); Gelligaer School Managers.

Fullwell.—Extensions, school; Mr. Scrafton, builder, Sunderland.

Gourock. — Tenements, Ashburn Estate (50,000*l.*); Mr. M'Taggart, Glasgow.

Great Ouseburn.—Meeting house; Messrs. Rowntree & Co., Ltd., York.

Grimsby.—Church hall, corner of Corporation-road and Ayscough-street; Rev. E. Loft. Plans have been passed for Messrs. G. & J. Smith for nine houses, Haven-avenue.

Halliwell.—Church house; Vicar, St. Thomas's.

Harlton.—Additions, Church of St. Mary the Virgin; Mr. T. D. Atkinson, architect, Trumpington-street, Cambridge.

Headstone.—Church (6,000*l.*); Vicar, St. George's.

Heswell.—Police station (1,940*l.*); Messrs. Huxley, builders, Malpas, Cheshire.

Heybridge.—School (5,689*l.*); Mr. P. M. Beaumont, architect, Maldon.

Heywood.—Extension, mills, for Messrs. J. C. Hargreaves & Co. Extension, mill, for Messrs. J. Brennan & Co.

Hoo Chattenden (Kent).—School (2,425*l.*); Messrs. Friday & Ling, builders, Erith.

Hove.—The following plans have been passed:—Conversion of stables into garages, 9, Queen's-mews, for Mr. Harold Dixon, on behalf of the West Brighton Estate Company; three pairs, semi-detached houses, Erroll-road, for Messrs. Anderson & Burstow, on behalf of Mr. R. E. Trower.

Hull.—Alterations, Park-street Barracks (2,500*l.*) for the East Riding Territorial Force Association.

Ilkeston. — Additions, Roman Catholic Schools; Vicar, Roman Catholic Church. Proposed school (12,400*l.*); Mr. E. W. Small, Secretary, Education Committee, Derbyshire County Council, Derby.

Kingstown.—Library; Messrs. O'Callaghan & Webb, architects, South Frederick-street, Dublin.

Knelworth.—School (2,328*l.*); County Surveyor, Herts County Council, Hertford.

Loftus (N. R. Yorks).—School (4,078*l.*); Mr. J. C. Wrigley, Secretary, Education Committe, N. R. Yorks, Northallerton.

Luton.—Proposed public baths; Mr. S. F. L. Fox, Surveyor, Luton Town Council.

Maidstone.—Proposed enlargement of West Kent General Hospital (20,000*l.*); the Governors.

Middlesbrough. — Headquarters for N. Riding Territorial Force Association.

Morecambe.—Art and technical schools (11,200*l.*); Messrs. Jas. Hatch & Sons, builders, Lancaster.

Newark.—Proposed electric theatre, Barnby-gate; Newark Theatre Company, Ltd.

* See also our list of Competitions, Contracts, etc., on another page.

New Boultham.—Sixty houses for the Lincoln Co-operative Society.

Newburn.—Council Chambers, Newburn-lane (2,700*l.*); Mr. E. Cratney, architect, Wallsend; Mr. Thos. Clements, builder, Newcastle.

Northampton. — Congregational Church, Abington-avenue; Messrs. Sutton & Gregory, Bromley House, Angel-row, Nottingham.

Penzance. — Proposed isolation hospital; Surveyor, Penzance Urban District Council.

Pontyates.—Church (1,250*l.*); Mr. W. Griffiths, architect, Falcon chambers, Llanelly.

Portsea.—Artisans' dwellings; Mr. P. Murch, Surveyor, Portsmouth Town Council.

Powfoot (Annan).—Hotel; Mr. W. H. Veitch, Powfoot, Annan.

Radcliffe. — Proposed extension, Notts County Lunatic Asylum; Architect, care of Committee of Visitors.

Ramsgate.—Bank for London and Westminster Bank, High-street; Messrs. Grummant Bros., builders, Grange-road, Ramsgate.

Rochdale.—Twenty-four houses; Messrs. R. & T. Howarth, builders, Rochdale.

Rotherham.—Proposed extensions, destructor plant (5,000*l.*); Surveyor, Rotherham Town Council. The following plans have been passed:—Four houses, Oates-street, for Mr. T. Palethorpe; nine houses, Oates-street, for Mr. Wm. Charles; eight houses, William-street, for Mr. H. Addis.

Rugby.—Offices, Brownsover Mill-road, for the British Thomson-Houston Company.

Scarborough. — Music-hall, Huntress-row; Local Syndicate.

Seven Kings. — Additions, St. John's Church; Messrs. J. E. K. and J. P. Cutts, 14, Southampton-street, Strand, W.C.

Sheffield.—The following plans have been passed:—Four houses, Withens-avenue, for Mr. W. J. Patchett; eighteen houses, Firth Park-road, for Mr. Frank Gosling; alterations, Sheldon Hotel, Denby and Hill streets, for Messrs. H. Tomlinson, Ltd.; twelve houses, Otter-street, for Mr. G. E. Phillips; four houses, Coupe-road, for Messrs. Flowerday & Sons; additions, premises, Leeds-road, for Messrs. Brown Bayley's Steel Works, Ltd.; additions, Royal Hospital, Eldon-street, for the Governors; cinematograph theatre, Langsett and Hatton roads, for Mr. F. Phœnix; addition, workshop, Brightside-lane, for Messrs. Vickers, Sons, & Maxim, Ltd.; ten houses, Romsdal-road and Newent-lane, for Mr. F. Ridal.

Stone.—Special subjects centre (1,997*l.*); Messrs. Thos. Mason & Son, builders, Hednesford.

Streetgate.—Mission Church; Vicar, St. Cuthbert's Church, Marley Hill, Yorks.

Stretford.—The Urban District Council has passed the following plans:—Garage, Trafford Park, for Messrs. W. T. Glover & Co., Ltd.; three houses, Ayres-road, for Mr. R. W. Cunningham.

Swanscombe.—School, Knockhall (2,890*l.*); Mr. G. Bower, builder, Sittingbourne.

Terni.—Mill for Terni Steel Works.

Thatcham.—Proposed school; Mr. W. C. F. Anderson, Secretary, Education Committee, Berks County Council, Reading.

Tinsley.—Garage and messroom at works of British Abrasive Wheel Company.

Torquay.—The following plans have been passed:—Four houses, Forest-road, for Mr. J. R. Watson; four houses, Forest-road, for Mr. H. Keslake; three houses, St. Mary Church-road, for Mr. S. Pack; eight houses, Redden Hill-road, for Mr. H. Cruse. The following plans have been lodged:—Six houses off Warbro-road, for Mr. R. F. S. Willis; three houses, St. Mary Church-road, for Mr. S. Packe.

Tunstall.—Factory for Messrs. J. & T. Meakin, Bucknall Potteries, Hanley; Mr. C. Colishaw, architect, Stafford-street, Hanley; Mr. S. Heath, builder, Basford, Stoke-on-Trent.

Waltham Cross.—School (350 places); County Surveyor, Herts County Council, Hertford.

West Stanley.—Addition, parish church; Mr. C. Hodgson Fowler, architect, The College, Durham.

Whitby.—School (1,700*l.*); Mr. J. C. Wrigley, Secretary, Education Committee, N. R. Yorks County Council, Northallerton.

Windermere. — Additions, St. Martin's Church; Mr. W. L. Dolman, architect, Windermere.

Woolston (Hants).—Technical school (5,000*l.*); Mr. D. T. Cowan, Secretary, Education Committee, Hants County Council, Winchester.

Worcester.—Parish hall, Holy Trinity (1,500*l.*); Mr. H. Percy Smith, architect, Foregate, Worcester.

Wrotham.—School, Borough-green (4,160*l.*); Mr. C. E. Skinner, builder, Railway-street, Chatham.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE London County Council dealt with the following applications under the London Building Acts at its meeting on Tuesday last (the names of the applicants are given between parentheses):—

Lines of Frontage and Projections.

Bow and Bromley.—That the Council, on the application of Mr. G. Bugler, do consent to the retention of an advertisement board and a projecting sign at No. 27, Addington-road, Bow.—Consent.

Brixton.—Erection of a building on the western side of Hackford-road, Brixton (Mr. J. E. Beaumont for Messrs. Pickfords, Ltd.).—Consent.

Chelsea.—The erection of nine buildings with bay windows and balconies, on the eastern side of Vale-avenue, Chelsea, northward of Mallord-street (Messrs. Elms & Jupp for Messrs. Pink, Fryer, & Co.).—Consent.

City of London.—Retention of a projection in front of Nos. 3 and 4, Royal Exchange-buildings, City (Messrs. Ernest George & Yeates).—Consent.

Dulwich.—Erection of buildings on the south-western side of Lordship-lane, Dulwich (Mr. S. Woodward for Mr. E. Hudson).—Consent.

Finsbury, Central.—That the application of Mr. C. E. Pettit for an extension of the periods within which the erection of buildings on the site of Nos. 184 to 204 (even numbers) inclusive, Pentonville-road, Finsbury, was required to be commenced and completed, be granted.—Consent.

Hackney, South.—Erection on the western side of Swinnerton-street, Homerton, of a building marked "A" on the plan (Mr. C. E. Thomson).—Consent.

Hampstead.—Erection of buildings on the western side of Fortune Green-road, Hampstead (Mr. R. V. Hart).—Consent.

Hampstead.—That the Council, on the application of Messrs. Foster & Co., Ltd., do consent to the retention of an illuminated iron and glass sign at Nos. 80-84, High-road, Kilburn.—Consent.

Kennington.—That the Council, on the application of Mr. J. W. Jacomb Hood, do consent to the retention of an illuminated sign over the entrance to the grill-room, Vauxhall railway station, Vauxhall-cross, Lambeth.—Consent.

Lewisham.—Retention of an illuminated sign in front of No. 4, Holbeach-road, Catford (Mr. W. Wilkinson for Mr. C. Brown).—Consent.

St. George, Hanover-square.—Refacing of No. 22, Upper Grosvenor-street, St. George, Hanover-square (Mr. H. J. Helsdon for Messrs. J. Andrews & Sons).—Consent.

St. Pancras, West.—The erection of one-story shops in front of Nos. 74 and 76, Hampstead-road, St. Pancras (Messrs. Jurd, Sanders, & Christie for the Trustees of the late Mr. J. B. Forman).—Consent.

Strand.—The erection of an iron and glass shelter at the grillroom entrance to the Hôtel Victoria, Northumberland-avenue, Westminster (Messrs. Keeling, Teale, & Co., for Mr. E. Axten).—Refused.

Wandsworth.—Retention of a tool store and ladder store at No. 189, Upper Richmond-road, Wandsworth (Mr. J. C. Radford for Mr. W. Bastable.—Consent.

Westminster.—Erection of an oriel window in front of No. 32, Ennismore-mews, Westminster (Messrs. Hampton & Sons, Ltd.).—Consent.

Width of Way.

Hampstead.—Erection of a motor-house building on the north-western side of Groveplace, Hampstead (Mr. R. W. Campbell Davidson).—Consent.

Poplar.—The erection of a building on the northern side of Cuba-street, Poplar (Messrs. Parr & Sons for Messrs. C. & E. Morton).—Consent.

Width of Way and Lines of Frontage.

Limehouse.—The erection of two pairs of sliding doors in front of a warehouse building on the southern side of Ropemakers-fields, Limehouse (Mr. A. Migotti for Messrs. Sanders Bros.).—Refused.

Strand.—The erection of an addition to the Royal Westminster Ophthalmic Hospital, King William-street and Chandos-street, Westminster (Mr. J. Johnson for the Committee of the Hospital).—Refused.

Westminster.—The erection of an addition to the Middlesex Guildhall, Little George-street, Westminster (Mr. W. G. Austin for the Middlesex County Council).—Consent.

Width of Way and Construction.

Bow and Bromley.—That the Council, on the application of Mr. W. G. Harris, do approve the retention for a further period of a building of a temporary character at Five Bells Wharf, Old Ford-road, Bow.—Consent.

Line of Frontage and Construction.

Fulham.—That the Council, on the application of Mr. J. Hedges, do consent to the retention of an open wood and iron shed at the rear of No. 59, Langthorne-street, Fulham, abutting upon Woodlawn-road.—Consent.

Width of Way, Frontage, and Construction.

St. Pancras, North.—The erection of a wood and iron building of temporary character on the eastern side of Gilbert-street, St. Pancras, next to Franklin-street (Mr. W. Harbrow for Mr. C. Pitman).—Consent.

Space at Rear.

Chelsea.—A modification of the provisions of that section with regard to open spaces about buildings, so far as relates to the proposed erection of eight buildings on the western side of King's-row, Chelsea, with irregular open spaces at the rear (Messrs. Elms & Jupp for Messrs. W. Johnson & Co.).—Consent.

Chelsea.—A modification of the provisions of that section with regard to open spaces about buildings, so far as relates to the proposed erection of a building on the north-eastern side of Vale-avenue, Chelsea, to abut also upon the northern side of Mallord-street, with an irregular open space at the rear (Messrs. Elms & Jupp for Messrs. Pink, Fryer, & Co.).—Consent.

Working-class Dwellings.

Greenwich.—That the Council do make an order sanctioning a plan of intended dwelling-houses, to be inhabited by persons of the working class, and proposed to be erected on a site upon the eastern side of Anchor and Hope-lane, Charlton (Messrs. T. Dinwiddy & Sons for Messrs. W. Cory & Sons, Ltd).—Consent.

Buildings for the Supply of Electricity.

Chelsea.—The erection of a one-story addition to the Manor-street generating station, Chelsea, to abut upon Alpha-place (Mr. A. Roberts).—Refused.

Marylebone, West.—That the Council, on the application of Mr. J. Wilson, on behalf of the St. Marylebone Metropolitan Borough Council, do consent to the continued use, at the generating station, Aybrook-street (late North-street), St. Marylebone, of the ground floor of the building marked D on the deposited plans, as a battery-room, the use of the two upper floors of the building as office and meter stores, and the use of the building marked C on such plans as offices.—Consent.

Uniting of Buildings.

City of London.—The formation of two party wall openings at the ground-floor level between Nos. 107 and 108, Fleet-street, City (Messrs. Smee & Houchin for Messrs. Thos. Cook & Son).—Consent.

Clapham.—The placing of showcases in four openings in division walls at a building abutting upon Lavender-hill, St. John's-road, and Ilminster-gardens, Clapham Junction (Messrs. E. Pollard & Co.).—Refused.

Hampstead.—The formation of an opening 12 ft. by 12 ft. between Nos. 144 and 146, High-road, Kilburn, at the ground-floor level, and to the provision of double revolving steel shutters to such opening (Messrs. Dennison, Kett. & Co., Ltd., for Messrs. B. B. Evans & Co., Ltd.).—Consent.

Lambeth, North.—The uniting of Nos. 91-96 to Nos. 97-102, Mitre-street, Lambeth, by an opening at the ground-floor level (Messrs. Cluttons for the Ecclesiastical Commissioners).—Consent.

Marylebone, West.—The formation of an opening in a division wall at No. 370, Edgware-road, St. Marylebone, and the use of roller shutters in lieu of iron doors to such opening (Mr. J. Hudson for Messrs. Keevil & Sons).—Consent.

BOOKS RECEIVED.

"MECHANICAL WORLD" POCKET DIARY AND YEAR-BOOK FOR 1911. Pp. 423. (Emmott & Co., Ltd. 6d. net.)

LA MAISON DE RUBENS (PAVILLON DE LA VILLE D'ANVERS À L'EXPOSITION UNIVERSELLE DE BRUXELLES, 1910) RECONSTITUTION PAR HENRI BLOMME. Folio containing fourteen heliotype plates. (G. Van Oest et Cie., Bruxelles.)

QUANTITIES. By the late Professor Banister Fletcher. Eighth Edition. Revised by Herbert Phillips Fletcher. Pp. 462. (B. T. Batsford. 7s. 6d.)

RELICS AND MEMORIALS OF LONDON TOWN. By James S. Ogilvy. Pp. 316. (George Routledge & Sons, Ltd. 25s.)

PAPERS OF THE BRITISH SCHOOL AT ROME. Vol. V. Pp. 471. Plates 48 and 1 map. (Macmillan & Co., Ltd. 42s. net.)

GENERAL BUILDING NEWS.

CHURCH, LIGHTBOURNE.

The new Parish Church of St. Luke's, Lightbourne, in the north of Manchester, was consecrated by the Bishop of the Diocese on the 1st inst. The accommodation will be for 554, and the church has cost about 3,850*l*. It consists of nave, transepts, and aisles, with chancel, morning chapel, organ chamber, and a couple of vestries. It is built with brick in various shades of grey and red, with biscuit-coloured terra-cotta window tracery and dressings, the lining being of pressed red brick relieved by Bath stone dressings and arches, the pillars being of light red Runcorn and polished blue pearl granite. The contractors were Messrs. Thorpe & Son, of Old Trafford, Manchester, and the architect Mr. E. H. Lingen Barker, of London, Manchester, and Bristol.

ALL SAINTS' CHURCH, BEDFORD.

The dedication service of this church, which has been erected in a new and greatly populated district of Bedford, took place on November 1. The portion now completed is the chancel, priest and choir vestries, organ chamber, four bays of the nave, and south and north aisles, giving accommodation for about 700 sittings. The church, when completed, will have a morning chapel, tower, and nave 102 ft. long, making a total sitting room for 1,000 persons. The external walls are built of red-faced bricks and Weldon stone dressings, and roofs covered with red tiles, the nave, piers, and arches are of Weldon stone, and the whole plastered with a rough finish to follow the stone dressings. A pitch-pine open timber roof of the hammer beam type covers the nave, and the chancel roof is formed of curved ribs and panels. The floors of the church are in wood block, and the chancel paved with large black and white marble squares. The church is heated with radiators and lit with electric light designed to follow the piers. The joint architects are Sir A. W. Blomfield & Sons and Mr. George P. Allen, F.R.I.B.A., the latter superintending the whole of the work and designing the carved oak stalls and organ screen. The organ is by Messrs. Norman & Beard. Mr. S. Foster, of Bedford, was the contractor. The building was illustrated in the *Builder* of January 9, 1909.

SCHOOLS, NORTH WALSHAM.

The first of the new junior mixed schools and technical schools for Norfolk was opened at North Walsham recently. The building has been erected on a large site, 195 ft. by 187 ft., adjoining the old senior and infants' schools, and will accommodate 240 mixed junior children. There are five classrooms, four of which will accommodate fifty children each, and one classroom is for forty. The rooms are entered from a marching corridor 63 ft. long by 10 ft. wide. There are two separate entrances to the schools for girls and boys, with separate lobbies, lavatories, and there is a teachers' room. The buildings are carried out in red brick, with terra-cotta sills, heads, and cornices. The floors are of wood blocks. At the east of the junior school there is a detached block of buildings which contain a cookery classroom with separate entrance lobby. Adjoining the cookery lobby there is a carpenter's shop with a separate lobby and entrance. The builder is Mr. W. Mace, his sub-contractor for the woodwork being Mr. Cork. The architects were Messrs. Olley & Haward, of Great Yarmouth. The clerk of the works was Mr. J. Mickelburgh.

SCHOOL, HOYLAKE AND WEST KIRBY.

This High School is situated at the corner of the Hoylake Promenade and Hoyle-road. The main front of the building faces Hoyle-road. Accommodation is provided for 150 boys and 150 girls. In addition to the usual classrooms and main central hall, there is a manual instruction room and rooms for the storage of cycles on the ground floor, and a chemical laboratory, lecture-room, art-room, and dining-room on the first floor. In a separate building, used as a housewifery centre, and facing the promenade, there is provision for teaching cookery, laundry work, and housewifery. The architect was Mr. Edmund Ware (Messrs. Ware & Bailey).

SCHOOLS, MURTON COLLIERY.

New schools have been erected by the Durham County Council at Murton Colliery. Accommodation is provided for 1,700 children, divided into four departments, viz:—500 infants, 400 juniors mixed, 400 girls, and 400 boys. Besides these there is a detached building to serve as a cookery teaching centre for the district. There are thirty-four classrooms, two central halls—one for boys and one for girls—two marching corridors 12 ft. wide—one for the junior mixed and one for infants' department—eight cloakrooms and six teachers' rooms. Externally the buildings are finished in a bright red pressed brick, and covered with thick light green Westmorland slates, the roofs being broken up with curved gables and dormers, and finished with cupola-shaped turrets. The cost of the buildings, including the cookery department, is 15,340*l*. The architects of the buildings were Messrs. Clark & Moscrop, of Darlington and Middlesbrough, and the schools have been erected by Mr. A. J. Cooke, of Stockton-on-Tees.

PUPIL TEACHERS' CENTRE, LONG EATON.

The Pupil Teachers' Centre on Sawley-road, Long Eaton, was opened on the 29th ult. The school has accommodation for 300 students and pupil teachers. The five classrooms for students and three for pupil teachers are planned on the ground floor in wings radiating from a central hall, which is 80 ft. long, 33 ft. wide, and 30 ft. high. Over the art-room is a roof upon which work may be carried on in the open air. To provide for future extension of the building, the assistant master and mistresses' rooms have been planned so that they can be converted into classrooms. Concrete floors are also constructed over these and the classrooms. The walls are of brick and stone, and the exterior walls are of Loughborough red and purple sand bricks, whilst the stone used for dressing is from the quarries at Tansley Moor and Matlock. The floors are constructed with reinforced concrete and hollow tiles, and finished with oak blocks in the main hall and corridor, while maple blocks are used in the floors of all other rooms except the cloakrooms and workshops, where asphalt floors are laid. Most of the rooms are panelled to a height of 7 ft. The total cost of the building is about 14,900*l*., of which 2,500*l*. was spent on the foundations. Mr. G. H. Widdows was the architect of the building.

QUEEN ELIZABETH'S GRAMMAR SCHOOL, HEXHAM.

On the 2nd inst. the new Queen Elizabeth Grammar School at Hexham was formally opened by Sir Francis Blake, Bart., the Chairman of the Education Committee of Northumberland. On behalf of the architects (Messrs. Oliver, Leeson, & Wood) and the contractors (Messrs. R. Blackett & Son) a silver inkstand was presented to Sir Francis as a souvenir of the occasion.

SCHOOLS, ILKESTON.

The new Hallcroft Council Schools, built by the Ilkeston Education Committee, were opened on the 31st ult. The two blocks of schools are of the pavilion type. The two central classrooms are so arranged that by throwing back a screen practically the whole of the advantages of the central hall in the old type of school is obtained. Each school consists of six classrooms, and accommodation is provided for 680 children. Connecting the pavilions are corridors opening on both sides into verandahs. The buildings are lighted by electricity, and the total cost is just under 10*l*. 10s. per head of the accommodation. The architect was Mr. H. T. Sudbury, and the buildings have been erected by Mr. A. Earnshaw, of Ilkeston.

NEW SCHOOL, OGMORE VALE.

The new Aber Infants' School was opened on the 2nd inst. by Alderman W. Llewellyn, J.P. The building, which provides accommodation for 200 scholars, is planned on the corridor system, and, owing to the steep nature of the site, has two floors. The school was designed by Mr. Pugh-Jones, F.S.I., County Architect, Cardiff, under whose supervision the works have been executed by Messrs. Knox & Wells, of Cardiff. The contract price was 3,185*l*.

SALVATION ARMY'S HEADQUARTERS, HACKNEY.

On a site in Mare-street, Hackney, new headquarters for the women's social work in connexion with the Salvation Army have been built. Mr. A. Gordon is the architect of the building, which will provide thirty-three distinct sets of offices on four floors.

NEW VICARAGE, PAIGNTON.

The memorial-stone has just been laid of the new Vicarage in the Palace Ground, Paignton, by the Lord Bishop of Exeter. Since the Reformation the property has passed through a precarious and critical period, but it now returns to the Church, and the fine old XIIIth and XIVth century tower and walls, formerly in the possession of the Bishops of the Diocese, one of the few historic links in Paignton with the past, have been secured against defacement or destruction. These relics of the past are practically included in the new building, which will be erected from the design of Mr. W. D. Caroe, F.S.A., of Westminster. The new vicarage will be constructed of warm red local conglomerate in a free and picturesque manner with the usual equipment of a vicarage, and in its external appearance it will harmonise with the old Palace tower and walls and the church which stands close by. Windows will be casements with leaded lights, and the roof will be covered with green Cornish slate.—*Exeter Express and Echo.*

COUNCIL CHAMBERS, NEWBURN.

The foundation-stone of the building in course of erection in Newburn-lane, Newburn, for the accommodation of councillors and their officials, was laid recently. The new council chambers were designed by Mr. E. Cratney, of Wallsend, whose design was selected from fourteen other competing architects. It is a two-storied building in front and three stories in the rear. A short flight of stone steps gives access to the main entrance, which opens on a vestibule, on either side of which are offices for surveyor, sanitary inspector, rate collector, etc. A broad staircase leads to the council chamber and committee-rooms on the second floor. Mr. Thomas Clements, of Newcastle, is contractor.

NEW CHILDREN'S HOME, LINCOLN.

The foundation-stone was recently laid of a new Receiving Home for Children in Long Leys-road, for the erection of which the Lincoln Board of Guardians are responsible. No corridors are being built. There will be two internal staircases, one on each side of the building, instead of the usual external and one internal staircase. These staircases will lead from the ground floor to a boys' dormitory and a girls' dormitory, which are to be separated by the matron's room. They are being built to accommodate eight boys and a like number of girls. The first floor also contains a boys' and girls' sick room with other small conveniences. The ground floor will be made up of a receiving ward, where the children will be examined before being sent to rooms on either side, which are to be known as boys' and girls' day rooms. There will also be a kitchen and dining hall combined with a scullery, larders, lavatories, etc. A mother's sitting-room will divide the two children's day rooms. The home when completed will face the Long Leys-road, and will be 68 ft. long. The estimated cost is 1,600*l*. Messrs. W. Mortimer & Son are the architects, and the contractor is Mr. T. Elmes, of Gainsborough.

Y.M.C.A. BUILDINGS, CARDIFF.

New buildings in North Edward-street (adjoining the Cory Hall) have been erected for the junior section of the Y.M.C.A. For two years the junior members, to the numbers of about 120, have been housed in Dumfries-place, as the main building was barely sufficient for the senior section. Meanwhile, a scheme was afloat to erect the new building for the juniors. The new building has a frontage to North Edward-street. The lower floor is occupied by a gymnasium, with dressing-room and shower baths, etc., and a spectators' gallery. On the principal floor of the building leading from the staircase landing is the reception hall, from which access is gained to a games-room and a room for reading and writing. There are also attendants' office and committee-room. The second floor is occupied by an assembly-room, classrooms, a workshop, and additional shower baths. The front elevation is in Cattybrook red bricks, relieved by dressings, moulding, etc., of Portland stone, the lower story of the building being also of the latter material. The floors are of fire-resisting construction, as is also the flat roof of the building. The various rooms are heated by the hot-water system and lighted by electric light. The general contractors for the work are Messrs. E. Turner & Sons, and the architects are Messrs. Spier & Beavan.

MESSRS. WHITELEY'S NEW PREMISES.

The Mayor of Paddington has just declared the foundation-stone of William Whiteley's new premises to be well and truly laid. When the building is finished it will have a frontage to Queen's-road of 600 ft. and a depth of 300 ft., the site measuring 4 acres in extent. There will be five floors, giving 16 acres of space available for selling purposes. The building will have three domes, the central one, into which the entrance will open, being 150 ft. high. This dome will be open and surrounded by galleries. Beneath it will be an open floor space of 500 sq. ft. There will be twenty-four passenger lifts. The whole building will involve an expenditure of some 250,000*l*. It will be the first store to have a wireless telegraphy station and a children's playground, rest and lounge rooms for ladies and gentlemen, and a roof garden with a

lawn will be among its other novelties. The new building has been designed by Mr. John Belcher, R.A., and Mr. J. J. Joass.

INFIRMARY, NORWICH WORKHOUSE.

This infirmary was opened on the 26th ult. The building is erected on vacant ground to the west of the existing old infirmary, and is situated so as to obtain the greatest amount of sun possible, and contains the administrative block and the women's pavilion, the old infirmary building being used at present as a men's pavilion. The whole design, when completed, with a new men's pavilion, will accommodate 215 patients, including 110 women and 105 men, and a resident medical officer. The administrative block contains, on the ground floor, entrance hall, offices for resident medical officer and superintendent nurse, receiving rooms for men and women, dispensary, anæsthetic, operating, and sterilising rooms. The second floor contains a suite of rooms for the resident medical officer, and store rooms, and the third floor contains the maternity wards. The women's pavilion is connected to the administrative block by a corridor, the three floors having the same plan, which includes on each floor a large ward for thirty-two beds, a single-bed ward, and a two-bed ward, a dayroom screened off from the large ward, duty-room for charge nurse, linen store, bathroom and lavatories, and small stores. A large balcony is arranged on each floor, with entrance from the dayroom and large wards, suitable for beds for open-air treatment, to which is connected the emergency staircase. Adjoining the connecting corridor is the main staircase, in the well of which is an electrically driven push-button bed lift. Basements are arranged below the ground floor of each building, which serve for the distribution of hot water for service and for heating the building. An electrically driven pump is also fixed in the basement for supplying the storage tanks situated in the roof with water from the house wells. The building has been constructed as far as possible with fireproof materials, the whole of the floors, supporting beams, ceilings, and staircases being built *in situ* with reinforced concrete, the floors being covered with Dolomeut jointless flooring, and the walls to height of 4 ft. with green glazed tiles. The floor and walls of the operating-room to a height of 4 ft. 6 in. are laid with white marble mosaic, and the upper portion of the walls and ceilings are treated with white petrified liquid, which gives a glazed surface without joints, and is perfectly smooth. New bedrooms to accommodate twelve additional nurses have been added to the nurses' home, and the dining and sitting rooms have also been enlarged. The following were the contractors:—Mr. W. J. Hannant, building contractor, Norwich; Messrs. Cunnell Bros., bricks, Norwich; Messrs. Watson & Kirby, plumbing and sanitary fittings, Norwich; Mr. Edward Potter, stone work, Norwich; Messrs. Crotch & Son, plaster work, Norwich; Messrs. Barnards, Ltd., escape stairs and iron railings, Norwich; Messrs. Pank & Son, electric pumps, Norwich; Messrs. Craven, Dunnill, & Co., tile workers, Jackfield, Shropshire; Messrs. Bradford & Co., reinforced concrete, Homerton, London; Messrs. Smith, Major, & Stevens, electrical lift, Battersea; Messrs. Musgrave & Co., central ward stoves, Belfast; The British Dolomeut Company, Ltd., jointless flooring, Westminster; The Brightside Engineering Company, Ltd., heating and hot water service, Sheffield; Messrs. Wing & Webb, locks and door furniture, Wolverhampton; Messrs. Crittall, iron casements, Braintree; Messrs. Scarles Bros., addition to the nurses' home, Norwich; the Norwich Corporation, electric lighting, Norwich. The architects were Messrs. Morgan & Buckingham, of Norwich, and the clerk of works Mr. E. Bilby.

BUSINESS PREMISES, DUNDEE.

The reconstruction of the Eagle Buildings in Dock-street and Trades-lane, Dundee, has been completed for Messrs. Currie & Co., Ltd., building-trade merchants. The Eagle Buildings are cement-faced, and pillars, cornices, balustrading, etc., are of Portland cement. The whole of the basement has been excavated, and pillars of ferro-concrete put in, and concrete flooring put down. The telephone installation includes intercommunication between offices and warehouses and a private wire to the firm's depôt at the East Station. The contractors for the work of reconstruction were Messrs. H. & F. Thomson, architects, Dundee; Messrs. Nicholds & Reynolds, Ltd., engineers, Westminster, S.W.; the Clyde Structural Iron Company, Ltd., Glasgow; Messrs. Jas. Binny & Co., builders, Dundee; Messrs. John Scott & Son, joiners, Dundee; Mr. Alex. M'Ritchie, plasterer, Dundee; Mr. D. Bremner, plumber, Dundee; Messrs. Alex. Hogg & Sons, slaters, Broughty Ferry; Mr. Joseph Nicholson, painter, Dundee; and Maxwells (Dundee), Ltd., electricians, Dundee; Mr. Peter C. Barron, clerk of works.

MOTOR-CAR PREMISES, NORWICH.

The Austin Motor Company, Ltd. (Manufacturers of the "Austin" cars), whose works are at Northfield, near Birmingham, have opened a depôt at Nos. 18 and 22, Prince of Wales-road, Norwich, which is under the charge of Mr. T. A. Boycott. Structural alterations have been carried out to suit the requirements of an up-to-date motor-car business. The front portion has been devoted to showroom purposes, with showcases, etc. The shop front is of polished mahogany with fluted pilasters and carved Ionic caps, and large plate-glass doors. In the rear is a machine shop, with motor pit of sufficient length to take several cars, and the machinery includes a plant of electrically-driven machines. The alteration of the premises has been executed by Messrs. J. Youngs & Son, builders, Norwich, under the supervision of Mr. F. W. Skipper, architect and surveyor, London-street, Norwich.

NEW HALL FOR BOWNESS.

The foundation-stone was laid recently of a new public hall, reading and recreation rooms in the centre of the village of Bowness-on-Solway. The buildings, which have already been partly erected from the plans of Mr. H. H. Hodgkinson, architect, Lowther-street, will be known as the Lindow Hall. The hall is 45 ft. long and 32½ ft. wide, with deck-lighted roof and window on the sides and end. There is also a recreation room, 25 ft. 6 in. long by 18 ft. wide, with reading-room above, access to the latter being by stairs in two flights. The buildings are of brick with white stone dressings from Claughton Manor and Newbie, Annan, for the fronts, and red stone at the sides supplied by Messrs. W. Graves & Sons, Curthwaite. The contractors are Messrs. W. Batey & Sons, joiners, The Crescent; Mr. R. Wills, builder, Glasson; Mr. T. B. Hetherington, plumber, Carlisle; Messrs. Harrington Brothers, plasterers, Carlisle; Mr. G. Irving, slater, Carlisle; and Messrs. Ellis & Keenan, painters, Carlisle.

THEATRES AT BARGOED AND MOUNTAIN ASH.

A central site has been secured in Oxford-street, Mountain Ash, for the purpose of erecting a cinematograph theatre. The plans have been prepared by Mr. George Kenshole, architect, Bargoed. The theatre will provide accommodation for over 1,000 people. The syndicate is opening the new Picture Palace at Bargoed. This building will accommodate 700 persons. The plans were prepared by Mr. George Kenshole, architect, Bargoed, and the contract carried out by Messrs. Williams & Sons, contractors, of New Tredegar and Bargoed.

TRADE NEWS.

A new factory is being erected for Messrs. Venesta Patent Three-ply Wood Company on 10 acres of waterside land at Silvertown, West Ham, which, when completed, will find employment for some 800 skilled workers. The site was selected by the firm after exhaustive inquiries, we understand, throughout the south of England.

Amongst the recent contracts entered into by the Horsfall Destructor Company are an installation for the Mersey Docks and Harbour Board and for the Aberdare Urban District Council, both of which are now approaching completion. Their other contracts for patent refuse destructor plants include Newtown (Montgomery), Grimsby, Colombo, and Manaos, in Brazil. This company was recently awarded at the Health Exhibition at Brighton held under the auspices of the Royal Sanitary Institute a silver medal for the patent mechanical charging gear (overhead tub system), and a bronze medal for their balance tip self-acting sanitary carts under the Constable patents, which this company now act as sole licensees for. The company is now under the supervision of Mr. Thomas W. How as managing director in conjunction with Mr. George Watson.

The Council school at Great Staughton, Hunts, is being warmed and ventilated by means of D. O. Boyd's "Hygiastic" ventilating school grates, made by Messrs. O'Brien, Thomas, & Co., Upper Thames-street, London, E.C., and Excelsior Works, Rollins-street, Old Kent-road, S.E. The firm are also supplying these grates to the Holy Trinity Schools at Vauxhall Bridge-road, Westminster.

The new theatre, Shirebrook, is being ventilated by means of Shorland's patent exhaust roof ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

STAINED GLASS & DECORATION.

ST. ANDREW'S CHURCH, BOSCOMBE.

The large east window of this church, consisting of five lights and tracery, has just been filled with stained glass by Messrs. Percy Bacon & Brothers, of London. The design, which was approved by the architect, Mr. John Oldrid Scott, represents the Crucifixion in the centre light, flanked on either side by the B.V. Mary and St. John, with St. Andrew and St. Peter in the outer lights. The rose window in the sanctuary was filled at the same time, as a memorial to the late John Keble, whose portrait is introduced.

CHRIST CHURCH, CLAPTON, N.E.

The stained glass in the east window of this church has just been completed by Messrs. Percy Bacon & Brothers, of London. The window contains five lights and tracery, in which is depicted Our Lord in Majesty in the centre light, with various subjects from the life of Our Lord in the side lights.

SANITARY AND ENGINEERING NEWS.

SEWERAGE DISPOSAL, FLETCHERTOWN.

The Wigton Rural District Council (Cumberland) have instructed Mr. Harry W. Taylor, A.M.Inst.C.E. (Messrs. Taylor, Wallin, & Taylor, of Newcastle-upon-Tyne and Birmingham), to report upon the sewerage and sewage disposal of Fletchertown.

TRADE CATALOGUES.

MESSRS. A. C. WELLS & Co., of Midland-road, London, N.W., have forwarded us a price-list of the well-known Wells's incandescent oil-lamp. These lamps are made in two patterns, self-contained, arranged with small oil reservoirs for hanging in any position without pipes or wires, and installation lamps, connected by small-bore copper tubing to a tank on the ground. Oil is put under pressure in a welded steel tank, and taken from the reservoir to the burner in small, flexible copper tubing, and is converted into

gas. The gas thus formed is mixed with the correct amount of air for perfect combustion, and is finally burnt in incandescent mantles. The lamp is made in sizes up to a capacity of 1,500 candle-power. A lamp of this capacity is designed to burn for sixteen hours without recharging. The firm state that the price per 1,000 candle-power per hour is ¾d.

Messrs. O'Brien, Thomas, & Co., of 17 and 18, Upper Thames-street, London, E.C., send us their catalogue No. 41, a handy volume, neatly bound, forming a complete price-list of stoves, general ironwork, and sanitary goods manufactured by this firm. Messrs. O'Brien, Thomas make a speciality of anthracite coal stoves. Those illustrated in the list under notice are moderate in price and inoffensive in design. We note that, in consequence of the rapid extension of their business, this firm have lately acquired

additional factory accommodation, making a still larger output of their goods possible.

The Diamond Tread Company, Ltd., of 28, Victoria-street, Westminster, enclose us a leaflet dealing with their patent diamond non-slipping treads. The object aimed at in their manufacture is to secure a filling harder than the foundation of steel or other material in which the non-slip substance is embedded. This substance is composed of artificial diamond grit mixed with a granite cement. Diamond treads have been extensively employed in London for staircases subjected to constant traffic, the whole of the staircases on the new underground electric railways of London having been fitted with them.

We have received from the Leeds Fireclay Company, whose London address is Norfolk-street, Strand, W.C., a booklet indicating a few of their leading lines. We notice more particularly Oates & Green's patent "open-channel" lavatory, which should be well adapted for school use. The basins are provided with open accessible overflow, an open down-flow channel taking the place of the usual down pipe, and an open floor channel. The waste and overflow discharges through the open down-flow channel into the floor channel. Another novelty is the "Univert" conduit for inspection-chambers, in which a central receiving hopper takes the place of the usual straight or curved main channel.

The Carron Company call our attention to the Carron smokeless heating stoves, for burning anthracite coal, coalite, or gas-coke. This method of heating, it is claimed, excels the firegrate in cleanliness, absence of smoke, dust, and dirt, and consequent minimising of labour. The designs illustrated in a booklet, which the firm have forwarded to us, are of sufficient variety to harmonise with any style of fireplace.

The Albion Clay Company, Ltd., of 38, Victoria-street, Westminster, S.W., send us leaflets dealing with their wares. The "Albion" stoneware street gully is manufactured by this firm. This gully is made with an inspection inlet inside, so as to give easy access in case of stoppage in the sewer. This firm are the makers of the "Patent Paragon" pipes. The chief advantages claimed for the pipe are that a perfect invert is secured, while there are no obstructive ledges at the joints to retard the flow of sewage. The socket is made with a flat bore to secure a firm bearing on the bed of the trench. The Albion Clay Company also manufacture the well-known Sykes's interceptor.

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENT.

A mistake was made in our last issue as to the address of Messrs. Lovegrove & Papworth, architects and surveyors, 22, King-street, Hammersmith, and at Old-street, E.C. The change of address refers to the private address of one member of the firm; but the firm's offices remain as heretofore at 374-8, Old-street, E.C., and 22, King street, Hammersmith.

PROPERTY SALES, LONDON.

It is stated that Mr. Mallaby-Deeley, M.P., has purchased St. James's Court, Buckingham-gate, S.W., consisting of eight blocks of residential flats, with 250 suites of apartments, restaurant, and shops, yielding a total income of nearly 40,000*l.* per annum. The various premises are held under leases for terms having about eighty-six years unexpired at ground and other rents which in the aggregate amount to 9,000*l.* per annum. St. James's Court was built after Mr. C. J. Chirney Pawley's plans and designs, upon the site of the buildings and two gardens of Emanuel Hospital founded under the will (1594) of the Lady Anne, widow of Gregory Fienes, tenth Lord Dacre of the South, and sister of Thomas Sackville, Earl of Dorset, the poet. The almshouses and school for twenty inmates and twenty children were erected in 1601 on a site of four acres near Stourton House, the home of the Lords Dacre in Tothill Fields, and were rebuilt *temp.* Queen Anne, the chapel being rebuilt in 1732. The picturesque group standing around three sides of a planted quadrangle with flagged pathways and water conduits, was illustrated in the *Builder* of September 10, 1892. The materials were sold in February, 1894, in pursuance of an order of the Court, Chancery Division. The big gates, of forged and hammered iron throughout, were executed by Messrs. Starkie Gardner & Co., after Mr. Pawley's designs in the earlier Spanish Netherlands style of Charles V. (first half of the XVIth century), and are illustrated in our number of December 18, 1897; leading features of the design are the Dacre knot, the family badge, with crests of the ragged staff and pilgrim's shell.—In November will be offered for sale at the Mart the Gaiety Restaurant, with the Masonic Lodge, Temple, and Chambers, and the thirty-five suites of flats and chambers known as Aldwych-mansions on the five upper floors, all being held by leases from the London County Council and others for about forty-one years unexpired at ground and other rents amounting to 6,594*l.* per annum. The buildings, with the theatre and Messrs. Shorts' premises, were erected from the plans and designs of Mr. Ernest Runtz and Mr. G. McLean Ford, with an elevation based upon a general sketch design made by Mr. R. Norman Shaw, R.A., at the instance of the London County Council.

BRITISH EXHIBITORS ABROAD.

The recent Proclamation Solonnelle des Recompenses by his Majesty the King of the Belgians in connexion with the Brussels Exhibition has probably called public attention to what has been accomplished by the Exhibitions Branch of the Board of Trade. An organisation has been created capable of dealing with any number of exhibitions at which it is decided that it will be for the benefit of British trade to be represented. The trades and industries of Great Britain and Ireland which have any chance of extending their business in the country visited are first made aware of the possibilities in this respect, and then are given an opportunity of purchasing space. Having packed their materials, would-be exhibitors find there are special rates for carriage by rail and by sea. At the exhibition gates the British authorities take charge of their packing-cases, assist with unskilled labour in unpacking, provide stands, and even "dress" the exhibits if asked to do so. Suitable colour schemes are arranged for the different buildings. In addition, contracts are made on a wholesale scale for the supply of gas, water, and electricity, and of all these contracts exhibitors are given the benefit. Their packing-cases are stored during the "run" of the exhibition: they are assisted to repack at the close, and in those instances in which they do not sell their exhibits they have special transport facilities for the return of what has been unsold. Exhibitors are given the benefit also of whatever special trade knowledge is at the disposal of the Government, and a room is provided for them in which to meet possible customers and to read or write. There are no extra fees demanded after payment for space. While the Exhibitions Branch of the Board of Trade were looking after British interests in Brussels, they were taking part both in the Vienna Exposition and in the Argentine Centenary Celebrations in Buenos Ayres. In the Austrian capital the British section represented a quaint old Cheshire house, and contained numbers of interesting trophies which had been lent. So far as Buenos Ayres is concerned, the Government has participated in four distinct exhibitions which formed part of the great Centenary Celebrations. These were the Railway and Land Transport Exhibition, Hygiene Exhibition, Agricultural Exhibition, and Fine Arts Exhibition. In the case of the first mentioned, Great Britain occupied a space of approximately 29,000 square metres, as compared with 5,700 in the German section, 5,000 in the Italian section, 4,500 in the section controlled by the United States, 3,500 in the Austrian section, 3,500 in the French section, and 3,000 in the Belgian section. We held 5,000 square metres of space in the Hygiene Exhibition, while in the Fine Arts Exhibition the British section, more than 50 per cent. of the pictures shown, it is estimated, will have been sold by the time the buildings are closed.

MEMORIAL BUST, SOUTHMOLTON.

A marble bust of Hugh Squier has just been unveiled at Southmolton by Earl Fortescue, Lord High Steward of the Borough. The bust, of white Sicilian marble, is of heroic proportions, and, with the inscribed basis, is placed in a canopy of honour upon the façade of the Guildhall. The work has been carried out by Messrs. Harry Hems & Sons, of Exeter.

PROPOSED PAVILION AND WINTER GARDENS FOR MARGATE.

An inquiry has been held at the Town Hall, Margate, by Mr. A. W. Brightmore, D.Sc., M.Inst.C.E., one of the Inspectors of the Local Government Board, into the application of the Margate Corporation for sanction to borrow the sum of 22,000*l.* for the purpose of erecting a pavilion and winter gardens at Fort Green. The Borough Surveyor is Mr. E. Borg.

THE LIGHTING OF THE PALLADIUM THEATRE OF VARIETIES.

We understand that, whilst certain minor details of the lighting of this building are still undecided, it can be stated that the fittings in the auditorium will be chiefly of the Georgian type in a dull brass finish. The main ceiling will have two fifty-light electroliers, eight ten-light electroliers, and other fittings; corresponding designs of brackets, three-light pendants, and ceiling fittings will be employed for the fronts, ceilings, and walls of the various circles. The stalls saloon, lounge, and landings will be lighted by electroliers and other fittings of Georgian design, whilst fittings of Louis XV. style in gilt and crystal have been selected for the dress circle saloon. Efficient provision has been made for the lighting of the passages, dressing-rooms, and other similar situations. The fittings for the interior allow for an aggregate of approximately 1,200 lights, whilst a large number of special signs and arc lamp brackets will be mounted on the exterior. "Tantalum" and "Onewatt" lamps and Siemens arc lamps will be employed exclusively for the lighting, and the whole of the fittings are being supplied by Messrs. Siemens Bros. Dynamo Works, Ltd., Tyssen-street, Dalston, whose own artist is responsible for the accepted designs.

PUBLIC OFFICES, WHITEHALL AND SOUTH KENSINGTON.

The new building in Whitehall, with frontages to Whitehall-place and Great Scotland-yard, which is to be built for the Board of Agriculture, has been designed by, we understand, Mr. H. N. Hawks, of H.M.'s Office of Works. The general style is that of the English Renaissance, freely treated, having raised pavilions at either end of the main elevation, and a range of Ionic columns in front of the third and fourth floors, and a similar range along the floor above, beneath which is a bold cornice. Much of the inner construction will be carried out in reinforced concrete. Messrs. J. Mowlem & Co., Ltd., are the contractors for refacing the western side of the Paymaster General's Office, adjoining the Horse Guards, with stones from the front of an old house recently pulled down in Great George-street. Some alterations of the interior will at the same time be effected. The Meteorological Office has migrated from Victoria-street to fresh quarters erected in Exhibition-road, at the corner of Imperial Institute-road. The main hall, for the library and museum, and the offices of the Director and the Marine Superintendent, are planned on the first floor, where also the statistical branch is provided for. The ground floor is appropriated to the new Kensington post-office.

THE CRYSTAL PALACE OLD STUDENTS' SOCIETY.

The sixteenth annual dinner of this Society was held on the 3rd inst. at the Criterion Restaurant, Piccadilly, W. Among those present were Mr. Charles Hawksley, Past President Inst.C.E., Mr. R. Elliott-Cooper, Vice-President Inst.C.E., and Mr. J. W. Wilson, M.Inst.C.E., the principal of the Crystal Palace School of Practical Engineering. The chair was occupied by the newly elected President, Mr. R. J. Simpson. The toast of the Crystal Palace School of Engineering was proposed by Mr. R. Elliott-Cooper, and that of the Society by Mr. Charles Hawksley. The highest appreciation was expressed for the work of the Hon. Secretary and Treasurer, Mr. Percy Griffith, M.Inst.C.E.

MEMORIAL, CHURCH OF ST. MARY, DUNTON.

A chancel screen, as restored, and a rood loft, executed in carved oak by Messrs. Houghton, of Worcester, after Mr. Cogswell's designs, have been placed in the parish church, Dunton, Norfolk, in memory of John and Elizabeth Long. Beneath the rood are set nine figures in bold relief of the Virgin Mary, the four Evangelists, and four Archangels. With the new work are incorporated the doorways and stairs of the former rood loft.

SIR FRANCIS S. POWELL MEMORIAL.

A bronze statue, sculptured by Mr. E. G. Gillick, of Chelsea, has been unveiled in Mesnes Park, Wigan, in memory of Sir Francis Sharp Powell, Bart., M.P. for Wigan. On the pedestal are panels emblematical of health and education, of which Sir Francis Powell was a strenuous advocate.

A DECEASED BUILDER'S ESTATE.

The estate of the late Mr. Cornelius Mansfield, of Forest-lane, Stratford, E., who died on February 28, aged seventy-two years, builder and tile manufacturer, and for twenty years member of West Ham Borough Council,

is sworn as of 44,107*l.* gross value, with 15,841*l.* net personalty.

OPTICAL EDUCATION.

Mr. James Aitchison informs us that a meeting of opticians was held at Anderton's Hotel recently, and over which he presided, to support the scheme of the Education Department of the London County Council for the establishment of an up-to-date Opto-Technical Institute, so strongly advocated by Professor Silvanus Thompson, Dr. R. T. Glazebrook, the Director of the National Physical Laboratory, and others, and he quotes the following extract from the report, just to hand, of H.M. Inspectors of the Board of Education for the session 1909-1910, showing the urgency for the matter:—"(8) Technical Optics—Need for New Building.—The urgent need for a new building for the locally very important department of technical optics is strongly emphasised. The present accommodation in the Horological Institute (Clerkenwell), opposite the Polytechnic, is quite inadequate and unsuitable. Every room is fully occupied, and many of the rooms are so small that there is insufficient space in which to carry out the experiments and workshop tasks effectively. Surprisingly good work has been done, however, under the hampered conditions, and the department is well worthy of the effective aid of a new, suitable building. This is the most urgent matter calling for attention, and it is understood that the Governors are fully alive to the fact." Mr. Aitchison adds:—"There is no trade which needs such an amount of skilled labour and assistance under direct expert mathematical direction as the work of the optician. It cannot be too strongly impressed upon all interested that money spent upon improved theoretical and practical optical training will be an investment in the interests of the people."

COLONIAL SURVEY APPOINTMENTS.

We have received a copy of the regulations governing Colonial Survey appointments. For the purpose of selecting surveyors, Ceylon, the Federated Malay States, and the East Africa and Uganda Protectorates will be grouped, and candidates will be required to pass the same tests and go through the same preliminary training. Candidates will, however, be allowed to indicate their preference for particular colonies, and, if they wish it, to await the occurrence of vacancies. It is possible that other colonies or protectorates may be included in these arrangements in the future; but for the present they will apply only to the countries named, which are those in which vacancies may be expected to occur most frequently. Candidates must be between the ages of twenty-one and twenty-seven, and should be unmarried. Anyone wishing to become a candidate for these posts should apply in writing to the Private Secretary to the Secretary of State, Colonial Office, London, S.W. A candidate not exempted will be required to pass two tests:—(*a*) A qualifying examination in mathematics, including algebra, geometry, and plane and spherical trigonometry, and (*b*) a qualifying examination in the use and adjustment of surveying instruments. For these examinations, which will be conducted at the Surveyors' Institution, an examiner nominated by the Secretary of State will be associated with the examiners nominated by the Institution. The candidate will be required to pay a fee of one guinea for each examination. A candidate who has passed with honours in mathematics, physical science, or engineering, or who has obtained an equivalent diploma or distinction in a University or school of a University in the United Kingdom, or who has been licensed to practise as a surveyor in one of his Majesty's dominions, will not be required to undergo any technical or educational test. A candidate who has passed the examination for the Associated Membership of the Institute of Civil Engineers or for the Professional Associateship or Fellowship of the Surveyors' Institution, or who has obtained the surveying diploma of the Royal Geographical Society, will be exempt from the technical test referred to in (*b*) above.

GEOLOGICAL SURVEY AROUND ALRESFORD.

The Board of Agriculture and Fisheries have informed us of the publication of a colour-printed geological map (sheet No. 300). In explanation of the map, a memoir has been published of the Geological Survey on the geology of the country around Alresford. Chapter 1 of the memoir gives an introductory account of the physical features and structure of the area. Chapter 2 describes the lower cretaceous, and Chapters 3 to 7 the upper cretaceous rocks, together with a tabular list of the fossils. Chapter 8 contains an account of the tertiary beds. In Chapter 9 the tectonic structure is explained. Chapters 10 to 12 deal with the various superficial deposits, and Chapter 13 treats of economic geology under the headings of soils, land dressing, building, and road materials. A few notes on local springs are included. Copies may be obtained from any agents for the sale of Ordnance Survey maps, or directly or through any bookseller from the Ordnance Survey Office, Southampton; map, price 1s. 6d.; memoir, price 2s.

CLOSING OF DWELLING-HOUSES.

The returns received by the Local Government Board from the local authorities in England and Wales for the year ended March 31, 1910, furnish information in regard to the closing of dwelling-houses. During 1909 587 closing orders were obtained by the local authorities; but although the returns for the year ended on March 31, 1910, are not quite complete, it appears that no fewer than 1,500 such orders were obtained or made by the local authorities, being an increase of 913, or 156 per cent., upon the number of closing orders for the year 1908-9. Of these 1,500 orders 775 were obtained from the justices in the period of eight months, April 1, 1909, to December 3, 1909, thus showing a substantial increase in that period alone over the number of orders obtained during the previous twelve months. The remaining 725 orders were made by the local authorities in the four months—December, 1909, to March, 1910.

THE INSTITUTE OF METALS. CORROSION COMMITTEE'S REPORT.

The annual general meeting of the Institute of Metals will be held at the Institution of Mechanical Engineers, Storey's-gate, Westminster, S.W., on Tuesday and Wednesday, January 17 and 18, 1911. At this meeting a number of papers will be presented, together with the preliminary report to the Corrosion Committee. It will be remembered that this Committee was appointed some months ago to investigate cases of corrosion of the non-ferrous metals. The preliminary report will show the present state of our knowledge of the corrosion of non-ferrous metals and alloys, and will contain suggestions for a research into the causes of the corrosion by sea-water of brass condenser tubes. To take place in the afternoon of January 18 there has been arranged a visit to the works of the Thames Ironworks and Shipbuilding Company, Ltd. In view of the success of the first annual dinner, which was held in January last, the Council has decided that there shall be a second annual dinner, to take place in the evening of January 17, this being the first day of the annual general meeting. The dinner will be held, as before, at the Criterion Restaurant. The Institute has now been founded just two years, and has celebrated its birthday by becoming an incorporated institution. The Secretary of the Institute of Metals is Mr. G. Shaw Scott, M.Sc., Caxton House, Westminster, S.W.

OXFORD.

The reconstruction, now in progress, of the east wing of the Union Society's premises, between Balliol and the Corn Market, will provide further space for the library, writing, reading, and billiard rooms, improved lavatory and service accommodation, and steward's house, at an estimated cost of 12,000*l.* The plans were made by the late W. E. Mills, A.R.I.B.A., of Oxford. The original "Debating Society" removed to the present site, since extended at various times, in 1852—a room for debates was built after Alfred Waterhouse's designs, and the old debating-room was converted into a library; the wall paintings and decorations were by Burne-Jones, Rossetti, and other artists. The new buildings for Lady Margaret Hall, just opened, were designed by Mr. Reginald Blomfield, A.R.A.; they form the central part of the second block, which comprises the Wordsworth Building—also by Mr. Blomfield—illustrated in the *Builder* of February 13, 1897. The new building contains the dinner hall, panelled in oak by past and present students in tribute to Miss Wordsworth, the late Principal, the library, Principal's and students' rooms, kitchen, and offices. When Lady Margaret Hall was founded, thirty years ago, some additional buildings were erected from designs by Mr. Basil Champneys. The University have acquired, through the munificence of Mr. Bailey, of Johannesburg, for purposes of the School of Geography, the old house in Broad-street inhabited by the late Sir Henry Acland, and by Dr. Hayes, Professor of Music in 1743-77. Mr. Briton Rivière, R.A., has been elected an honorary fellow of Oriel College.

WREN'S EPITAPH, ST. PAUL'S.

The *Times* reprints from its issue of October 26, 1810, a paragraph, signed "Architectus," which affords a characteristic specimen of the querulous, carping criticism of the time. "Architectus" rehearses the inscription:—"Subtus conditur hujus ecclesiæ et urbis conditor Christopherus Wren; qui vixit annos ultra nonaginta non sibi, sed bono publico; Lector si monumentum requiris circumspice. Obiit XXV. Feb., ætatis XCI., anno MDCCXXIII." He then observes:—"This erudite inscription is now complete. The facetious punning on the words *conditur* and *conditor* may have induced the poetick licence in using *hiding* for *burying*, and *founder* for *architect;* but the change of the address to the reader from 'si quæris [sic] monumentum,' etc., has no pun to excuse the impertinence of the 'whether-or-no-*si*' of this new latinity. . . . It is lamentable that such vulgarity should disgrace such a cathedral, such a man, and such an age." We have always understood that the stone over the north door with the epitaph—certainly the clause "Lector si monumentum requiris circumspice"—is due to Robert Mylne, the architect; for the use of "conditur" and "conditor" in the senses of burying and of architectural building there is full warrant in the writings of Cicero, Pliny, Livy, Virgil, Ovid, and others of their day. *Si* with the present indicative introduces a condition which is assumed to be true.

THE NATIONAL COLLECTIONS.

The late Captain H. Boyles Murray, of South Kensington, who died on August 24, has bequeathed to the Victoria and Albert Museum, South Kensington, for the benefit of the nation, all his collection of works of art, including pictures, jewellery, miniatures, china, ecclesiastical plate, etc., or such as the trustees may select, with a proviso as to its retention there, and as much as possible in its entirety, as one undivided collection. He has also left 50,000*l.* to the museum trustees for investment by them and the purchase out of the income annually of works of art to be added to the "Captain H. B. Murray's Bequest." The trustees of the National Portrait Gallery have just acquired the portrait done in crayons by Mr. C. H. Shannon of the late Dr. Furnivall, which was drawn some ten years ago, and given by Mr. Robert Steele to the National Art Collections Fund, of which the committee offered it to the trustees.

THE TURIN EXHIBITION.

In view of the interest which has been aroused by the work of the Exhibitions Branch of the Board of Trade with regard to Brussels, Vienna, and Buenos Aires, it may be interesting to give some account of the next undertaking for which the new organisation is making itself responsible in Turin. This is to be held under the auspices of the Italian Government, and, as in the previous cases, is to be of an international character. Turin, which has a population of 400,000 inhabitants, is, as regards age, contemporary with Rome, and is full of historic and antiquarian interest. It possesses the finest armoury in the world, and, in addition, has numerous museums, art galleries, and monuments, principally in bronze. The exhibition stands at the end of the Corso Vittorio Emanuele II., and the grounds extend along both banks of the River Po, and are in the Valentine Park, quite close to Porta Nuova, the central railway station. About 500 ft. from the left bank of the river and 35 ft. above it, in the south-east end of the park, is the main façade of the buildings for the British section, which alone, with part of the Italian section, stands on the side nearest the city. The front of the buildings takes the form of a crescent, and is surmounted by a central dome, with smaller domes supporting on either hand. The British Pavilion has been isolated and rendered practically fireproof. Every precaution has, in fact, been taken both by the Exhibitions Branch of the Board of Trade and by the Italian authorities to prevent such another disaster as occurred in Brussels. The space available for occupation by the representatives of British industry within the section is 20,000 square metres.

CAPITAL AND LABOUR.

SWANSEA PAINTERS' WAGES.

The report of the Board of Arbitration which inquired into the Swansea painting trade dispute has been received. The men are awarded ½d. an hour increase, which brings the rate up to 8½d. Their hours are shortened, to conform to the hours that rule in the local building trade, being six months' short hours and six months' long. It is provided that the men are not to smoke while at work, and any further disputes are to be settled by arbitration.

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this Number: Competition, —; Contracts, iv. vi. viii. x.; Public Appointments, xvi.; Auction Sales, xxii.

Certain conditions, beyond those given in the following information, are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bonâ-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.**

Competitions.

NOVEMBER 15. — **Ruislip-Northwood.** — TOWN PLANNING.—The Directors of Garden Estates, Ltd., invite designs for a town plan of estates of King's College, Cambridge, situated in the urban district of Ruislip and Northwood, Middlesex. Conditions and maps may now be obtained from Mr. Graham Kennedy, Secretary, Garden Estates, Ltd., 33, Henrietta-street, Strand. Deposit 1*l.* 1*s.* See advertisement in our issue of August 27.

NOVEMBER 29.—**Bangor, Co. Down.**—SEA-WATER BATHS.—The Bangor U.D.C. invite designs for baths to be built on the foreshore in conjunction with the existing sea-water pond at Pickie, at a cost of 7,050*l.* Premium 50*l.*, or to be merged into commission of 5 per cent. For further particulars apply to Mr. J. Milliken, Clerk to the Council, and see advertisement in issue of August 20.

NOVEMBER 30. — **Romford.** — The Town Planning and Modern House and Cottage Exhibition invite designs for gardens to houses and cottage, also perspective drawings suitable for reproduction. For further particulars see advertisement in our issue of September 17, and of October 8.

DECEMBER 1. — **Bournemouth.** — REBUILDING PREMISES.—Competitive designs are invited from architects for rebuilding premises for Mr. J. E. Beale. Three premiums (100*l.* 50*l.*, and 25*l.*) are offered. For further particulars see advertisement in our issue of September 17.

DECEMBER 1.—**Dublin.**—New pavilion to the Royal Hospital for Incurables at Donnybrook. Open only to architects practising in Dublin. Premia 100*l.* (to be merged), 30*l.*, and 20*l.* Conditions on application to the Registrar.

DECEMBER 1.—**Manchester.**—LAYING-OUT ESTATE.—The Manchester Corporation invite designs for laying-out their Blackley Estate. Three premiums are offered, viz., 150*l.*, 100*l.*, and 50*l.* See our issue of September 3, page 264, for further particulars.

DECEMBER 5.—**Rhosneigr, Anglesey.**—WATER AND SEWERAGE SCHEMES.—The Valley R.D.C. invite plans and specifications, in competition for water and sewerage schemes for the village of Rhosneigr. Plans and specifications will be adjudicated upon by the Valley R.D.C., and any person or persons whom they may decide to call in to assist. Mr. Owen J. Hughes, Clerk to the Valley R.D.C., Bryncuhelyn, Llanerchymedd, Anglesey.

DECEMBER 14. — **Douglas, Isle of Man.** — The owners of the Villa Marina invite designs for the erection of a pavilion and the laying out of a pleasure gardens, etc. The sum to be spent on the work is 16,000*l.* See our issue of November 5, page 563, for further particulars.

JANUARY 14, 1911.—**Knightsbridge.**—Complete particulars of a competition for remodelling part of the Trevor Estate, Knightsbridge, will be found on page xvi. of our issue of October 15.

MARCH 31, 1911.—**Romford.**—The Town Planning and Modern House and Cottage Exhibition invite designs for the general plan of Gidea Park, Squirrels Heath, Romford. For further particulars see advertisement in our issue of September 17, and of October 8.

MARCH 31, 1911.—**Trondhjem, Norway.**—PROPOSED HARBOUR AND RAILWAY EXTENSION.—Competitive designs for above are invited by the Joint Committee of the State Railways and the City Harbour Commissioners. See our issue of November 5, page 563, and that of October 15, page 444, for further information.

NOVEMBER 1, 1911.—**City of St. Petersburg.**—MONUMENT TO ALEXANDER II.—Particulars in our issue of August 13, 1910.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NOVEMBER 12-24.—**Tredegar.**—DOCTORS' RESIDENCE, ETC.—For the erection of new surgery and doctors' and dentists' residence, for the Tredegar Medical Aid and Sick Relief Fund. Plans, etc., may be seen at the office of Mr. A. F. Webb, architect and surveyor, 60, High-street, Blackwood, where quantities may be obtained upon deposit of 1*l.* 1*s.* Applications to be made on or before the 12th inst.

NOVEMBER 12. — **Wolverhampton.** — EXTENSIONS, ETC.—For proposed extensions and alterations to the Royal Orphanage of Wolverhampton. Names and addresses not later than November 12, enclosing deposit of 2*l.* 2*s.*, to Mr. Fred T. Beck, Architect and Diocesan Surveyor, Wulfrun-chambers, Darlington-street, Wolverhampton.

NOVEMBER 14.—**Accrington.**—RETAINING AND FOUNDATION WALLS, EXCAVATING, ETC.—For taking down existing buildings, excavating, preparation of site, and for the building of retaining and foundation walls in connexion with extension for Messrs. Higham's Woodnook Mill (contract No. 2). Application by letter to Mr. Henry Ross, A.R.I.B.A., 15, Cannon-street, Accrington.

NOVEMBER 14. — **Barrow-in-Furness.** — ALTERATIONS TO SECONDARY SCHOOL.—The Local Education Authority invite tenders for certain alterations at the Municipal Secondary School. Quantities, etc., may be had on application at the Borough Engineer and Surveyor's Office, Town Hall.

NOVEMBER 14.—**Bristol.**—ALTERATIONS TO CHAPEL.—The Guardians invite tenders for structural alterations in the old chapel at the Stapleton Workhouse. Specification, etc., can be obtained on application to Mr. J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol.

NOVEMBER 14.—**Downstow, South Brent.**—FARMHOUSE.—For the erection of farmhouse and buildings. Plans, etc., may be seen on application to Mr. Matthews, Beara Farm, South Brent.

NOVEMBER 14.—**Fence Houses.**—HOUSES.—Tenders are invited by the Lambton Collieries, Ltd., for the building of thirty-five houses. Plans, etc., can be seen at the architect's office, Philadelphia Lime Depot.

NOVEMBER 14.—**Hatfield, near Doncaster.**—HOUSES.—For works required in the erection of four houses. Plans, etc., may be seen, and forms obtained, at the office of Mr. Alexander M. Cobban, architect and surveyor, 12, Home-street, Scunthorpe, Lincs.

NOVEMBER 14.—**Kingussie.**—FOUNTAIN.—For the mason and plumber departments of public fountain to be erected on Ruthven-road. Plans, etc., may be seen with the architect, Mr. Alexander Mackenzie, C.E., Kingussie.

NOVEMBER 14.—**York.**—TRAMWAY SHELTER.—The Corporation invite tenders for the erection of a waiting shelter in Station-road. Drawings may be seen, and specification, etc., obtained, from Mr. F. W. Spurr, City Engineer, Guildhall, York.

NOVEMBER 15.—**Acton.**—HOSPITAL PAVILION.—The U.D.C. invite tenders for the erection of a pavilion, etc., at the Isolation Hospital, Wales Farm-road, Acton, W. Full particulars and forms may be obtained from Mr. F. Sadler, Engineer and Surveyor, Council Offices, Winchester-street, Acton, W.

NOVEMBER 15.—**Kingussie.**—GOLF HOUSE.—For the various works required in the erection of a new golf house. Plans, etc., may be seen with the architect, Mr. Alexander Mackenzie, C.E., Kingussie.

NOVEMBER 15.—**Loughborough.**—CHURCH.—For the erection of St. Peter's Church, for the Building Committee. Plans, etc., may be seen, and quantities obtained, upon application either to Mr. W. S. Weatherley, architect, 4, Suffolk-street, Pall Mall East, S.W., or at the office of Messrs. Barrowcliff & Allcock, architects, Town Hall-chambers, Loughborough, upon payment of 2*l.* 2*s.*

NOVEMBER 15.—**Merthyr.**—COUNCIL SCHOOLS.—The Education Committee invite tenders for the erection of infants' school, Darren View, and boys' and girls' schools at Thomas Town Park. Application for particulars in writing to the Deputy Surveyor, Town Hall, not later than the 15th inst., and deposit of 2*l.* 2*s.* with the Borough Controller.

NOVEMBER 15.—**Portsmouth.**—URINALS.—The Corporation invite tenders for constructing a four-stall urinal, within Clarendon Gardens, and an eight-stall urinal in Goldsmith-avenue. Specifications may be seen, and forms obtained, at the Borough Engineer's Office at the Town Hall.

NOVEMBER 15.—**Wookey Henton, Somerset.**—COUNCIL SCHOOL ALTERATIONS, ETC.—The County Education Committee invite tenders for additions and alterations to the Council School. Specification, etc., can be seen at the school, or at the office of Messrs. Price & Jane Weston-super-Mare, from whom any further information may be obtained.

NOVEMBER 16. — **Aylesbury.** — WALLS.—Chesham Memorial Committee invite tenders for the erection of Portland stone dwarf walls, iron standards and chains, and laying paving, etc., around the statue of the late Lord Chesham, in the Market Square. Drawings may be seen (by appointment), and specification obtained, on application to Messrs. Percy A. Wright and Wm. H. Taylor, Hon. Secretaries, Town Hall, Aylesbury, upon payment of 1*l.* 1*s.*

NOVEMBER 16.—**Bude.**—RESTAURANT, ETC.—For building a new restaurant and additions to the premises in Garden-terrace, for Mr. W. H. Barkell. Drawings, etc., can be seen on the premises, and any further information may be obtained at the offices of Mr. Ernest Wise, M.S.A., architect.

NOVEMBER 16. — **Keighley.** — HOUSES.—For the various works required in the erection of two houses off Fell-lane. Plans may be seen, and quantities obtained, at the offices of Messrs. John Haggas & Sons, architects, North-street, Keighley.

NOVEMBER 16.—**Knock, Newtownmore.**—VILLA.—For the various works required in the erection of a villa. Plans, etc., may be seen with the architect, Mr. Alexander Mackenzie, C.E., Kingussie.

NOVEMBER 16.—**Roose.**—ALTERATIONS AT WORKHOUSE.—The Parish of Barrow-in-Furness invite tenders for alterations to the wards on the women's side at the Workhouse. Plans, etc., may be inspected, and quantities obtained, at the office of the Architect, Mr. H. T. Fowler, A.R.I.B.A., Cornwallis-street, Barrow.

NOVEMBER 17.—**Bradford.**—WAREHOUSE.—Proposed wool warehouse in Sunbridge-road. Names, together with 10*s.* 6*d.* deposit per trade, to the architect, Mr. Rhodes Calvert, F.R.I.B.A., Forster-square, Bradford.

NOVEMBER 17.—**Crumlin, Mon.**—REBUILDING HOTEL.—Rebuilding the Railway Hotel, for Messrs. Griffiths Brothers, Ltd. Quantities can be obtained on deposit of 2*l.* 2*s.* Mr. H. J. Griggs, A.R.I.B.A., architect, Metropolitan Bank-chambers, Newport, Mon.

NOVEMBER 17.—**Rowley Hill.**—SUNDAY SCHOOL.—For the erection of a new Wesleyan Sunday school at Rowley Hill. Plans may be seen, and quantities obtained, at the office of Mr. J. Berry, architect and surveyor, 3, Market-place, Huddersfield.

NOVEMBER 18.—**Castleford.**—SCHOOL ALTERATIONS.—The West Riding Education Committee invite whole or separate tenders for Wesley-street Council School alterations. Plans may be seen, and specifications, etc., obtained, on application to the Education Architect, County Hall, Wakefield. 1*l.* in each case must be sent by separate letter to the West Riding Treasurer, County Hall, Wakefield.

NOVEMBER 18.—**Prittlewell and Southend.**—DRILL-HALL, ETC.—Territorial Force Association of the County of Essex invite tenders for erection of drill-hall, instructor's quarters, stores, etc., at Prittlewell, and alterations and additions to the drill-hall, York-road, Southend. Applications, etc., accompanied by a cheque for 2*l.* 2*s.*, to be made before November 19, to Colonel F. F. Johnson, C.B., Secretary, Territorial Force Association, County of Essex, Bank-chambers, Chelmsford.

NOVEMBER 19.—**Abercynon.**—SCHOOLROOM.—For the erection of a schoolroom in Glancynon-terrace, for the Trustees of Tabernacle Welsh Calvinistic Methodist Church. Plans, etc., prepared by Messrs. Morgan & Ilford, Mountain Ash, may be seen at Mr. John Jones's Ironmongery Stores, Margaret-street, Abercynon.

NOVEMBER 19.—**Blackwood, Mon.**—SHOPS.—For the erection of a block of three shops, etc., for Mr. W. R. Davies. Plans, etc., may be seen at the offices of Mr. D. M. Davies, M.S.A., architect, Underhill-chambers, Caerphilly.

NOVEMBER 19.—**Cwmcelyn, Blaina.**—COTTAGES.—The Blaina Central Building Club invite tenders for the erection of thirty-three cottages. Plans, etc., can be seen at the Blaina Inn, Blaina, on payment of 1*l.* 1*s.*

NOVEMBER 21.—**Cwmmawr. Pontyberem.**—HOUSES.—For the erection of 100 workmen's houses, for the New Dynant Anthracite Colliery, Ltd. Plans, etc., can be seen at the office of Mr. J. E. Burnell, 2, Frederick-street, Llanelly.

* NOVEMBER 21.—**Doncaster.**—SORTING OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for new sorting office at Doncaster. See advertisement in this issue for further particulars.

NOVEMBER 22. — **Croydon.** — REPAIRS, ETC.—The Guardians invite tenders for small additions and alterations and general repairs at "Lindens," and external painting, etc., at "Crosslands," 220 and 218, London-road. Specification, etc., may be seen, and quantities, etc., obtained, at the office of Mr. Henry Berney, architect, 104, George-street, Croydon, Surveyor to the Guardians, upon depositing 3*l.* 3*s.*

NOVEMBER 22.—**Millbay, Plymouth.**—BARRACKS.—The Devon Territorial Force Association invite tenders for the erection of barracks. Quantities may be obtained, on deposit of 3*l.* 5*s.*, at the offices of Mr. F. A. Clark, architect, 83, Old Town-street, Plymouth, where the plans and specification can also be inspected.

NOVEMBER 23.—**Hull.**—TRAMWAY CAR-SHED.—The Corporation invite tenders for the builders' work in connexion with an extension of the tramway car-shed on the Anlaby-road. Forms and other particulars may be obtained at the office of Mr. A. E. White, M.Inst.C.E., City Engineer, Town Hall, Hull.

NOVEMBER 26.—**Falmouth.**—PAVILION.—The B.C. invite tenders for the erection of a pavilion in Gyllyngdune-gardens. Plans, etc., may be seen, and all further information obtained, at the Borough Surveyor's Office, Municipal-buildings.

* NOVEMBER 26.—**Manchester.**—ALTERATIONS, ETC., TO SCHOOL.—The Manchester Education Committee invite tenders for the erection and completion of additions and alterations to Bank Meadow Council School. See advertisement in this issue for further particulars.

NOVEMBER 29.—**Troedyrhiw.**—HOUSES, ROADS, ETC.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

—For the erection of thirty-six houses, together with the construction of roads, drains, etc., for the Park Building Club. Plans, etc., can be seen at the office of Mr. T. Edmund Rees, architect and surveyor, Merthyr Tydfil.

NOVEMBER 30.—**Leeds.**—HOSTELS.—For the erection of two hostels for men students at the City of Leeds Training College, Beckett's Park, Headingley (contract No. 3). Names, together with a deposit of 2*l.* 2*s.*, to be sent at once to Mr. James Graham, Secretary for Education, Education Department, Calverley-street, Leeds.

* DECEMBER 5.—**Edinburgh.**—SUPERSTRUCTURES.—The Secretary of State for War invites tenders for superstructure of men's barrack block, foundations and superstructures of officers' and troop stables, at Redford, near Edinburgh. See advertisement in this issue for further particulars.

NO DATE.—**Hoylake.**—ADDITIONS AND ALTERATIONS.—For alterations and additions to Presbyterian church. Names to Mr. Owen Roberts, architect, 9, Cook-street, Liverpool.

* NO DATE.—**Merton, Surrey.**—CHURCH.—Tenders are invited for the erection of a church at Merton, Surrey. See advertisement in this issue for further particulars.

ENGINEERING, IRON, AND STEEL.

NOVEMBER 14.—**Easington Lane.**—HEATING BY HOT WATER.—For heating by hot water Lyons Parish Church. Plans may be seen at Lyons Rectory, Hetton-le-Hole, up to 12th inst.

NOVEMBER 14.—**Manchester.**—INSULATED CABLES.—The Electricity Committee invite tenders for the supply and delivery of single conductor rubber insulated cables. Specifications, etc., may be obtained from Mr. F. E. Hughes, Secretary, Electricity Department, Town Hall, Manchester.

NOVEMBER 15.—**Wheatley Hill.**—HEATING APPARATUS.—For installing heating apparatus at the Wheatley Hill Workmen's Club. Mr. A. Kilbourn, Secretary.

NOVEMBER 17.—**Brighton.**—HEATING APPARATUS.—The T.C. invite tenders for the heating of committee-rooms at the Town Hall. Specification, etc., can be obtained, and the drawings seen, on application at the office of the Borough Surveyor, Town Hall, Brighton.

NOVEMBER 21.—**Cams Mill.**—FERRO-CONCRETE BRIDGE AND CULVERT.—The Southampton C.C. invite tenders for the reconstruction of Cams Mill Bridge and culvert in ferro-concrete, with pile abutments, on Hennebique's principle, and concrete and brick face wall. Plans, etc., may be obtained on deposit of 2*l.* 2*s.*, and all other necessary information on application at the office of Mr. W. J. Taylor, County Surveyor, The Castle, Winchester. Deposits to be made by cheque payable to the "Hants County Council," and crossed "Bank of England."

NOVEMBER 21.—**Llandudno.**—CAST-IRON SPIGOT AND SOCKET PIPES.—The U.D.C. invite tenders for the supply of cast-iron spigot and socket (machine-faced) pipes. Specification, etc., will be forwarded upon application to Mr. E. Paley Stephenson, A.M.Inst.C.E., Engineer to the Council.

NOVEMBER 21.—**London.**—CAST-IRON PIPING.—The Commissioners of H.M. Works and Public Buildings invite tenders for the supply of cast-iron piping. Forms of tender and all particulars may be obtained from the Storekeeper, H.M. Office of Works Stores, 12, Lambeth Palace-road, S.E.

NOVEMBER 22.—**Sheffield.**—ROOF PRINCIPALS, ETC.—The Electric Light Committee invite tenders for the supply, delivery, and erection of roof principals, purlins, etc., for extensions to the engine-room, boiler-house, and coal store, comprising the Neepsend Generating Station (Contract 68). Specifications, etc., can be obtained, on payment of 1*l.* 1*s.*, from Mr. S. E. Fedden, General Manager and Engineer, Corporation Electric Supply Department, Commercial-street, Sheffield.

NOVEMBER 23.—**Hull.**—STEEL ROOF.—The Corporation invite tenders for the steel roof work required in an extension of the tramway car-shed on the Anlaby-road. Forms of tender and other particulars may be obtained at the City Engineer's Office on payment of 1*l.* Prints of the two contract plans can be obtained on payment of 5*s.*, not returnable. Remittances must be made payable to Mr. T. G. Milner, City Treasurer.

NOVEMBER 24.—**West Ham.**—IRONING MACHINE.—The Guardians invite tenders for the supply and fixing of an ironing machine of Decoudun type (110 in. by 24 in.) at their Infirmary, Whipp's Cross-road, Leytonstone. Further particulars can be obtained on application to the Steward of the Infirmary.

NOVEMBER 25.—**Walthamstow.**—TURBINE, WITH TANDEM GENERATORS.—The U.D.C. invite tenders for the supply, etc., at the Electricity Works, Priory-avenue, of one 1,000 kw. mixed pressure turbine, with tandem generators of 500 kw. each, complete (contract H). Conditions, etc., can be obtained from Mr. G. R. Spurr, Electricity Works, Walthamstow, on depositing 2*l.*

NOVEMBER 26.—**Barming Heath, near Maidstone.**—ENGINEERING WORK IN CONNEXION WITH ASYLUM MESS-ROOMS.—The Kent County Asylums Committee invite tenders for engineering work in connexion with mess-rooms at the County Asylum. Drawings, etc., may be obtained at the Asylum on depositing with the Engineer and Clerk of Works of the Asylum 10*s.* 6*d.*

NOVEMBER 29.—**Sheffield.**—COAL SHOOTS.—The Electric Light Committee invite tenders for the supply and erection of coal shoots for the Neepsend generating-station (contract No. 69). Specifications, etc., can be obtained, on payment of 1*l.* 1*s.*, from Mr. S. E. Fedden, General Manager and Engineer, Corporation Electric Supply Department, Commercial-street, Sheffield.

DECEMBER 1.—**Bradford.**—GAS RETORTS.—The Corporation invite tenders for the supply of gas retorts and of firebricks and fireclay required in the fixing. Form of tender may be obtained on application to Mr. Chas. Wood, Gas Engineer, Town Hall, Bradford.

MISCELLANEOUS.

NOVEMBER 14.—**Warrington.**—TUMBLER CART.—The Paving and Sewerage Committee invite tenders for one tumbler cart, with a capacity of 260 gallons. Specifications, forms, and all further information may be obtained at the office of Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office.

NOVEMBER 15.—**Acton.**—STEAM ROLLER; COLLECTION OF REFUSE.—The U.D.C. invite tenders for collecting refuse in the district; also supplying combined steam-roller and water-tank. Forms and full particulars may be obtained from Mr. F. Sadler, Engineer and Surveyor, Council Offices, Winchester-street, Acton, W.

NOVEMBER 15.—**Deptford.**—CHAIRS.—The B.C. invite tenders for the supply of 800 chairs for use at the baths. Particulars can be obtained from the Borough Surveyor, at the Town Hall, New Cross-road, S.E.

NOVEMBER 16.—**Dundee.**—CARTAGE.—Dundee Combination P.C. invite tenders for cartage. Particulars may be had from Mr. Chisholm, Governor, East Poorhouse.

NOVEMBER 16.—**Hendon.**—YELLOW DEAL ENDS.—The Guardians invite tenders for the supply of 20 fathoms of best yellow deal ends, delivered free to their Workhouse, near Edgware. Tenders, endorsed "Firewood," to be received by the Clerk to the Guardians, Union Offices, Edgware.

NOVEMBER 18.—**London.**—REMOVAL OF HOUSE REFUSE.—The B.C. of St. Marylebone invite tenders for the removal of house refuse. Particulars may be had on application to Mr. James Wilson, Town Clerk, Town Hall, Marylebone-lane, Oxford-street, W.

NOVEMBER 19.—**Altrincham.**—FURNISHING.—The U.D.C. Hospital Committee invite tenders for the furnishing of the new Isolation Hospital, Sinderland-road. Forms of tender can be obtained, on payment of 1*l.* 1*s.*, from Mr. W. S. Stokoe, Clerk, Town Hall, Altrincham.

NOVEMBER 19.—**Chorley.**—DISINFECTANT.—The Corporation invite tenders for supply of disinfecting liquid. Forms of tender may be obtained from Mr. Jno. Mills, Town Clerk.

NOVEMBER 19.—**Glasgow.**—LIBRARY FITTINGS.—The Corporation invite offers for the supply and erection of the hardwood fittings (chiefly hardwood) required in the various rooms of the new Mitchell Library. Specifications, etc., may be had on application at the Office of Public Works, City-chambers, 64, Cochrane-street.

NOVEMBER 21.—**Llandudno.**—REINFORCED-CONCRETE TUBES.—The U.D.C. invite tenders for the supply and delivery of reinforced-concrete tubes. Specification, with form, will be forwarded upon application to Mr. E. Paley Stephenson, A.M.Inst.C.E., Engineer to the Council, Town Hall, Llandudno.

NOVEMBER 21.—**Llandudno.**—TIMBER.—The U.D.C. invite tenders for the supply of greenheart or other hardwood timber. Specification, with form, will be forwarded upon application to Mr. E. Paley Stephenson, A.M.Inst.C.E., Engineer to the Council, Town Hall.

NOVEMBER 23.—**Audenshaw.**—REMOVAL OF REFUSE.—The U.D.C. invite tenders for the removal of nightsoil and refuse. Specifications, etc., can be had on application at the Council Offices, 2, Guide-lane, Audenshaw.

* NOVEMBER 25.—**London, E.C.**—WINDOW CLEANING.—The Commissioners of H.M. Works and Public Buildings invite tenders for window cleaning at the new General Post Office, King Edward's Building. See advertisement in this issue for further particulars.

NO DATE.—**Preston.**—CARTING BRICKS.—For carting bricks per 1,000 from Moorbrook Mill, Preston. Put on canal boat for Mr. W. J. Edmondson, 10, Morningside, Lancaster.

PAINTING, etc.

NOVEMBER 14.—**Heywood.**—CHURCH DECORATION.—The decoration of the Primitive Methodist Church, Bridge-street. For particulars apply to Mr. John Butterworth, 114, Bridge-street, Heywood.

NOVEMBER 14.—**Roose.**—PAINTING.—The Barrow-in-Furness Corporation invite tenders for painting and decorating Roose Council School. Quantities, etc., may now be obtained on application at the Borough Engineer's Office, Town Hall.

NOVEMBER 15.—**Manchester.**—PAINTING BRIDGES.—The Paving, Sewering, and Highways Committee invite tenders for painting various bridges in the city. Specification, etc., may be obtained on application at the City Surveyor's Office, Town Hall, Manchester, on payment to the City Treasurer of 2*l.* 2*s.* All cheques, etc., are to be made payable to the order of "The Corporation of Manchester."

NOVEMBER 16.—**Hull.**—COLOURING AND WHITEWASHING.—The Education Committee invite tenders for colouring and whitewashing, etc., certain of their schools. Particulars and forms can be obtained of Mr. J. T. Riley, Secretary of Education, Education Offices, Albion-street, Hull.

NOVEMBER 22.—**Epsom.**—PAINTING, ETC.—The R.D.C. invite tenders for the painting of the ventilating columns in the parishes of Cheam, Cuddington, and Ewell. Full particulars, with forms, can be obtained of Mr. W. T. Wooldridge, Surveyor to the Council.

ROADS, SANITARY, AND WATER WORKS.

NOVEMBER 14.—**Monaghan.**—CONCRETE FLOORING.—The Guardians invite tenders for laying a concrete floor in the Workhouse kitchen and scullery. A specification can be seen at the office of Mr. Patrick Toal, Clerk of Union, Boardroom, Workhouse, Monaghan.

NOVEMBER 15.—**Acton.**—TAR-MACADAM.—The U.D.C. invite tenders for resurfacing two roads with tar-macadam. Full particulars and forms may be obtained from Mr. F. Sadler, Engineer and Surveyor, Council Offices, Winchester-street, Acton, W.

NOVEMBER 15.—**Chester-le-Street.**—DRAINING, PAVING, ETC.—The Highways Committee of the U.D.C. invite tenders for the levelling, draining, and paving with whinstone chips, Edward-square. Plans, etc., may be seen, and particulars obtained, upon application at the office of the Surveyor, Mr. Wm. Ridley.

NOVEMBER 15.—**East Halton.**—SEWER.—The R.D.C. of Glanford Brigg invite tenders for laying a sewer in Kettlebridge-lane. Plans, etc., may be seen at the house of Mr. Jas. Fussey, East Halton.

NOVEMBER 15.—**Munlochy.**—WATER MAINS.—For relaying about 480 yds. of the main water pipe (fireclay), and alternatively for replacing the present fireclay main with iron pipes. Specification from Mr. Thomas Henderson, District Clerk, Fortrose.

NOVEMBER 16.—**Blackwell.**—SEWERS, ETC.—The R.D.C. invite tenders for laying certain stoneware and cast-iron sewers, with manholes complete; also the construction of sewage-disposal and other incidental works. Drawings, etc., may be seen, and full particulars obtained, at the office of the District Surveyor, Mr. H. Silcock, 67, Westgate, Mansfield, on deposit of 2*l.*

NOVEMBER 16.—**Catcliffe and Woodsetts.**—DRAINING, VENTILATING, ETC., AT SCHOOLS.—West Riding C.C. invite tenders for the work required to be done at the above schools: Laying new drains at Catcliffe School, and repairs and ventilation at Woodsetts School. Form of tender, etc., may be obtained from Mr. S. Absolom, Divisional Clerk, Education Offices, Woodhouse.

NOVEMBER 16.—**York.**—PIPE DRAIN.—The Corporation invite tenders for the construction of earthenware pipe drain, together with manhole and other works from "The Bungalow," Huntington-road, to the River Foss. Drawings may be seen, and specification obtained, on deposit of 1*l.* 1*s.*, on application to Mr. F. W. Spurr, City Engineer, Guildhall, York.

NOVEMBER 17.—**Croydon.**—PRIVATE STREET WORKS.—The R.D.C. invite tenders for making-up the Bridle-road, Beddington. Plans, etc., prepared by the Council's Surveyor, Mr. R. M. Chart, F.S.I., can be inspected, and forms obtained, at his office, Katharine-street, Croydon, on payment of 1*l.*

NOVEMBER 21.—**Castleford.**—GRANITED LIMBER ROCK ASPHALT.—The U.D.C. invite tenders for proposed works of street improvement. Names and addresses, stating experience, to Mr. H. H. Broadbent, Clerk to the Council, Council Offices, Castleford. Specifications will be forwarded on deposit of 1*l.* 1*s.*

NOVEMBER 21.—**Nether Whitaker and Over Whitacre.**—WATER SUPPLY.—The R.D.C. of Meriden invite tenders for providing and laying about 9,850 yds. of 4-in. cast-iron pipes, with valves, etc. Conditions, etc., may be seen, and quantities, etc., may be obtained, on depositing 1*l.* 1*s.*, at the office of Mr. A. W. Liggins, Clerk to the Council, 11, Priory-street, Coventry.

NOVEMBER 21.—**Porthcawl.**—PRIVATE STREET WORKS.—The U.D.C. invite tenders for the execution of certain private street improvement works in Lias-road and Church-place. Plans, etc., can only be inspected, and quantities, etc., obtained, on application to Mr. Arthur S. Lilley, A.M.Inst.C.E., the Council's Surveyor, Council Offices, Porthcawl, on depositing the sum of 2*l.* 2*s.*

NOVEMBER 21.—**Sutton-at-Hone.**—PRIVATE STREET WORKS.—The R.D.C. of Dartford invite tenders for the making-up of Alexander-road, Rollo-road, and Montague-road, in accordance with plans, etc., which may be seen at the office of the Council's Surveyor, Mr. John Hookins, "Gartly," Dartford-road, Dartford, between the hours of 9.30 and 10.30 a.m.

NOVEMBER 22.—**Mountain Ash.**—KERBING AND CHANNELLING.—The U.D.C. invite tenders for kerbing and channelling in Troedyrhiw. Plans, etc., may be seen, and forms, etc., obtained, on application to Mr. W. G. Thomas, Surveyor, Town Hall, Mountain Ash.

NOVEMBER 24.—**Guildford.**—PRIVATE STREET WORKS.—The T.C. invite tenders for forming, etc., Wodeland-road. Plan, etc., may be seen, and form obtained, on application to Mr. C. G. Mason, A.M.Inst.C.E., the Borough Surveyor, at his office in Tuns Gate.

NOVEMBER 25.—**Peasedown St. John.**—EXTENSION OF WATER MAINS.—The R.D. Councils of Bath and Clutton, Peasedown Water Joint Committee, invite tenders for an extension of the mains to Carlingcott. Names and addresses to Mr. William F. Bird, C.E., of Midsomer Norton.

NOVEMBER 25.—**Stillorgan.**—SEWERAGE.—Rathdown No. 1 R.D.C. invite tenders for the construction of a system of sewerage for the Stillorgan district. Plans, etc., which may be seen at the office of Mr. P. H. McCarthy, B.E., M.Inst.C.E.I., 39, Westmoreland-street, Dublin. Specification, etc., will be supplied on application to the Clerk's Office, Loughlinstown, on the deposit of a sum of 5*l.* 5*s.*

NOVEMBER 28.—**Kempston.**—SEWERAGE AND SEWAGE DISPOSAL.—The U.D.C. invite tenders for works of sewerage and sewage disposal. Drawings may be seen at the offices of the engineers, Messrs. Beesley, Son, & Nichols, MM.Inst.C.E., 11, Victoria-street, Westminster, S.W., when also specifications, etc., can be obtained on deposit of 5*l.* (by cheque).

NOVEMBER 28.—**Warrington.**—FORMING AND PAVING STREETS, ETC.—The Paving and Sewerage Committee invite tenders for the forming and paving of nineteen streets and twenty-four passages. Drawings, etc., may be seen, and forms, etc., and all further information obtained, at the office of Mr. Thos. Longdin, Borough Engineer and Surveyor, Borough Engineer and Surveyor's Office.

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NOVEMBER 29.—**Dartford.**—PRIVATE STREET WORKS.—The U.D.C. invite tenders for making-up Shenley and Nelson roads. Plans, etc., may be seen, and forms, etc., obtained, upon personal application at the office of the Surveyor, Council Offices, Dartford.

NOVEMBER 30.—**Easington and Thorpe.**—SEWERAGE.—The R.D.C. invite tenders for the construction of stoneware pipe sewer, cast-iron pipe sewer, dingle crossing, manholes, vent-shafts, etc. Plans, etc., can be seen with their Engineer and Surveyor, Mr. G. Waterhouse, and quantities obtained upon deposit of the sum of 2*l.* 2*s.*

NOVEMBER 30.—**Horden.**—SEWERAGE.—The R.D.C. of Easington invite tenders for the construction of stoneware pipe sewer, cast-iron pipe sewer, together with dingle crossing, manholes, etc. Plans, etc., may be seen with the Engineer and Surveyor, Mr. G. Waterhouse, and quantities obtained upon deposit of 2*l.* 2*s.*

NOVEMBER 30.—**Limerick.**—DRAINAGE.—The Board of the Morning Star River Draining District invite tenders for the maintenance of the works of this district for five years. Particulars to be had from Mr. W. Barrington, M.Inst.C.E., Secretary, Clare-chambers, Limerick.

DECEMBER 1.—**Dunstable.**—SEWAGE WORKS.—The Corporation invite tenders for the construction of tanks, percolating filters, and alterations to main outfall sewer, etc. Drawings, etc., may be seen, and quantities, and all other particulars obtained, on application at the office of Messrs. James Diggle & Son, civil engineers, 14, Victoria-street, Westminster, S.W., on payment of 2*l.* 2*s.*

STONES, MATERIAL, AND STORES.

NOVEMBER 14.—**Woodstock.**—STONE.—The R.D.C. invite tenders for the supply of stone. Forms of tender can be obtained on application at the office of Mr. A. G. Higgs, Clerk to the D.C., Woodstock.

NOVEMBER 15.—**Cowes, I.W.**—PORTLAND CEMENT.—The U.D.C. invite tenders for the supply of Portland cement. Form of tender and further particulars may be obtained at the office of Mr. John W. Webster, Surveyor and Water Engineer to the Council.

NOVEMBER 16.—**India.**—ZINC.—The East Indian Railway Company invite tenders for the supply and delivery of zinc ingots, as per specification, to be seen at the company's offices. For each specification a fee of 1*l.* 1*s.* is charged, which cannot under any circumstances be returned. Mr. C. W. Young, Secretary, Nicholas-lane, London, E.C.

NOVEMBER 16.—**Manchester.**—STORES.—The Cleansing Committee invite tenders for the supply of various materials. Specifications may be obtained from Mr. R. Williamson, Superintendent of the Cleansing Department, Town Hall.

NOVEMBER 16.—**Watford.**—GRANITE.—The U.D.C. invite tenders for granite, patching granite, and granite chippings. No official tender form will be issued. Mr. W. Hudson, Clerk and Solicitor, Council Offices, 14, High-street Watford.

NOVEMBER 17.—**Edinburgh.**—PAINTS, ETC.—The Prison Commissioners for Scotland invite offers for supplying oils, paints, etc. Forms of tender and other information can be obtained at the prisons. Mr. D. Crombie, Secretary, Prison Commission for Scotland, Edinburgh.

NOVEMBER 18.—**Ancoats.**—GRANITE.—The Chorlton and Manchester Joint Workhouse Committee invite tenders for the supply of about 2,000 tons of hard granite, to be delivered at their Workhouse in Tame-street. Forms of tender may be obtained at the offices of Mr. James Macdonald, Clerk to the Committee, Poor Law Offices, New Bridge-street, Manchester.

NOVEMBER 19.—**Devonport.**—GRANITE COPING, ETC.—The Water Committee invite tenders for the supply of granite coping and other stones required for the new Crownhill Reservoir. Particulars may be obtained from Mr. Frederick W. Lillicrap, Water Engineer, Municipal Offices, Devonport.

NOVEMBER 19.—**Swansea.**—CHAINS, TIMBER, AND STORES.—The Harbour Trustees invite tenders for the supply of stores. Forms of tenders, and full particulars, may be obtained on application to the Engineer, at the Harbour Office.

NOVEMBER 21.—**Romford.**—ROAD MATERIAL.—The R.D.C. invite tenders for the supply of blue Guernsey granite, broken to 1½-in. cube; also Kentish flints. Specifications and form of tender may be obtained from Mr. George Lapwood, Highway Surveyor, Victoria-chambers, Romford.

NOVEMBER 21.—**West Hartlepool.**—ROAD MATERIALS AND SEWER PIPES.—The Corporation invite tenders for the supply of road materials and sewer pipes, etc. Specifications, etc., can be obtained at the office of Mr. Nelson F. Dennis, M.Inst.C.E., Borough Engineer and Surveyor, Borough Engineer's Office.

NOVEMBER 24.—**York.**—RAILWAY STORES.—The Directors of the North-Eastern Railway invite tenders for the supply of stores. Forms, etc., may be obtained on application to Mr. E. H. Clark, Stores Superintendent, Gateshead.

NOVEMBER 26.—**Pelling, Co. Durham.**—STORES.—The U.D.C. invite tenders for the supply of paving materials, pipes, etc. Form may be obtained from the Surveyor any morning between the hours of 9 and 10, or will be sent on receipt of stamped addressed envelope.

NOVEMBER 30.—**Enniskillen.**—RAILWAY STORES.—The Sligo, Leitrim, and Northern Counties Railway invite tenders for the supply of goods. Forms can be had from Mr. John Duff, Secretary, Company's Office, Enniskillen.

NOVEMBER 30.—**Wakefield.**—RAILWAY STORES.—The Wakefield and District Light Railway Company invite tenders for the supply of stores. Schedules may be obtained from the Central Offices, Belle Isle, Wakefield, for each of which a charge of 1*s.* (not returnable) is made.

DECEMBER 3.—**Ipswich, Halesworth, and Eye.**—ROAD MATERIALS.—The East Suffolk C.C. invite tenders from actual quarry owners for the supply of road materials. Specifications, etc., can be obtained on application to the Chief Surveyor of Main Roads, County Hall, Ipswich.

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*ARCHITECTURAL AND GENERAL ASSISTANT	Herefordshire C.C.	150*l.* per annum	Nov. 22
*INSP. OF NUISANCES, SURV. & COLLECTOR OF RATES	Nailsworth U.D.C.	90*l.* per annum	Nov. 21
*SURVEYOR OF HIGHWAYS	Easthampstead R.D.C.	See advertisement in this issue	To date.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*FREEHOLD INVESTS. OR BLDG. SITES, FITZROY-SQ. & MARYLEBONE—At the Mart	Rutley, Son, & Vine	Nov. 29
*FREEHOLD BUILDING ESTATE, FULHAM, S.W.—At the Mart	Edwin Fox, Bousfield, Burnetts, & Baddeley	Dec. 14

PATENTS

APPLICATIONS PUBLISHED.*

16,300 of 1909.—William Edward Bullock and James Calcott: Process for the treatment of iron or steel to prevent rusting.

20,539 of 1909.—Alexander George Strathern: Plate-holding clamps or holding dogs.

22,743 of 1909.—The Coslett Anti-Rust Syndicate, Ltd., and Thomas Watts Coslett: Treatment of iron or steel to prevent rusting.

23,083 of 1909.—Christian Peter Christensen: Convertible ladders, trestles, and scaffolding.

23,405 of 1909.—Wilhelm Schicht: Windows.

24,397 of 1909.—J. Stone & Co., Ltd., George English Jakeman, and Arthur Wells: Gully gratings.

24,559 of 1909.—Jens Orten-Boving and Raymond Deloraine Johnson: Valves for controlling the flow of liquid through pipes.

25,499 of 1909.—Fred Atkins: Sprinklers for liquids, semi-liquids, powders, and the like.

26,009 of 1909.—John Barron: Interceptors, gulleys, grease and other traps.

26,261 of 1909.—Mary Stafford Paddison: Blinds, curtains, and the like.

26,404 of 1909.—Thomas Oliver and Benjamin Eastwood: Lever press for tiles, earthenware, or other articles.

26,982 of 1909.—John William Allsop, Henry Richardson, and William Douglas Lamb: Preparation for damp walls and the like.

29,610 of 1909.—Robert Valentine Notley and William Fowler Peck Taylor: Chimney and ventilating shaft tops.

30,312 of 1909.—George Henry Gascoigne and the United Kingdom Fireproofing Company: Joints for ferro-concrete reinforcements.

30,539 of 1909.—Ned Collier: Machines for making sanitary pipes, conduit blocks, bricks, and the like.

1,280 of 1910.—Harry Self: Brickwork for chimneys and flues, or as a setting for boilers, furnaces, ovens, and the like.

1,945 of 1910.—The Oliver Machinery Company, Ltd., and William Blackett Haigh: Wood mortising machines.

2,041 of 1910.—James Chambers Roe: Anti-window-rattling device.

2,511 of 1910.—Hector St. George Robinson: Bars for reinforcing concrete.

2,993 of 1910.—Johann Virck: Construction of concrete floors, ceilings, roofs, and the like.

3,094 of 1910.—Marc Perret: Reinforced concrete flooring.

3,344 of 1910.—Farnell & Farnell: Step-ladders.

4,662 of 1910.—Desiderius Nagy: Furnaces or fireplaces.

6,092 of 1910.—Montague Charles Smith: Spring waist sash fastener.

6,756 of 1910.—Finn Rahn: Fastenings for sash windows.

7,321 of 1910.—Peter Jensen: Clamps.

7,661 of 1910.—Seraphine Frances Bauwens: Nail or staple spacing device.

9,277 of 1910.—John Mitchell: Construction of building blocks for walls.

11,118 of 1910.—Alfred Macdonald: Fire-grates.

12,255 of 1910.—Rudolf Brohmann: Locks.

18,539 of 1910.—Charles Fondu: Balancing arrangement for sashes.

20,596 of 1910.—Robert Eichberg: Reinforced concrete floors.

* All these applications are in the stage in which opposition to the grant of patents upon them can be made.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

October 19.—By BARBER & SON (at Wellington).
Wellington, Salop.—Lawley, Horsehay, Lawley Bank, and New Dale Farms, residences and 336 cottages, 900 a., f. £44,107

October 20.—By FRANKLIN & JONES (at Bishop's Stortford).
Great Paradon, Essex.—Richmond Farm, 84 a. 1 r. 27 p., f. 1,830

By NELMES, POOLE, & JACKSON (at Ross).
Hoarwithy, Hereford.—Tresseck Estate, 195 a. 0 r. 36 p., f. 2,760

Ballingham, Hereford.—Pasture land, 5 a. 2 r. 17 p., f. 164

October 22.—By STAFFORD & ROGERS (at Bedford).
Kempston, Beds.—Lodge Estate, 175 a. 2 r. 33 p., f. 8,740

October 25.—By R. DONKIN & SON (at Newcastle-upon-Tyne).
Mitford, Northumberland.—Edington Estate, 617 a., f. 21,303

Morpeth, Northumberland.—Hill Head, Windmill and Collingwood Farms, 624 a., f. and c. 23,425

October 27.—WINTERTON & SONS (at Desborough).
Desborough, Northants.—Church Farm, 120 a. 2 r. 19 p., f. 5,100

Accommodation land, 82 a., f. 4,220

By WALLER & KING (at Southampton).
Woolston, Hants—23, College-rd., u.t. 934 yrs., g.r. 7*l.*, y.r. 32*l.* 445

October 28.—By H. W. & C. SPELMAN (at Norwich).
Norwich, Norfolk.—8, St. Benedicts-st, (s.), f., y.r. 50*l.* 600

By HAMPTON & SONS (at Barnstaple).
Braunton, Devon.—Dennis Marsh, 16 a. 2 r. 13 p., f. 610

October 29.—By PARISH, STAFFORD WALTER, & BELL (at Horncastle).
Hagworthingham, Lincs.—Manor Farm Estate, 366 a. 0 r. 24 p., f. 7,885

Hemingby, Lincs.—Brook House and Highfield Farms, 517 a. 2 r. 20 p., f. 9,500

October 29.—By COLLINS & COLLINS (at Redford).

Chellington, Beds.—Hill Lodge and Hill House Farms, 640 a. 2 r. 37 p., f.	£10,000

October 31.—By KEMSLEY.

Bermondsey.—1, 3, 5, 21, and 22, Purbrook-st., f., w.r. 137l. 16s.	1,220
140 and 142, Tower Bridge-rd., f., w.r. 57l. 4s.	570
20, Stevens-st., and 1, Whitstable-st., f., w.r. 48l. 10s.	610
97, 99, 129, 131, and 133, Abbey-st., f., w.r. 215l.	1,580
51 and 52, Larnaca-st., f., w.r. 62l. 8s.	650
East Tilbury, Essex.—Enclosures of arable, 8 a. 0 r. 2 p., f.	220

November 1.—By JOLLY & JAMES.

Hackney.—43, 45, and 47, Downs Park-rd., u.t. 51 yrs., g.r. 21l., y.r. 11l.	550
Kingsland.—5 to 11 (odd), Mansfield-st., and l.g.r. 2l. 15s., u.t. 9 yrs., g.r. 11l. 5s., w.r. 135l. 4s.	230

By ROGERS CHAPMAN & THOMAS.

Balham.—10, Shipka-rd., u.t. 67 yrs., g.r. 7l. 10s., p.	150

November 2.—By WILLIAM HOLLIS (with E. MILLARD & Co.).

Highgate.—Hornsey-la., Whitehall, f., y.r. 150l.	6,425

By MANSELL & ROWE.

Acerley.—Weighton-rd., Weighton-mews, u.t. 52 yrs. g.r. 52l. 10s., w.r. 188l. 2s.	390

By RUTLEY, SON, & VINE.

Piccadilly.—4, Swallow-st. (s.), u.t. 9½ yrs., g.r. 78l. (increasing to 88l.), p.	120
Brondesbury.—92, Maygrove-rd., u.t. 70 yrs., g.r. 6l. 10s., y.r. 40l.	330

By DOUGLAS YOUNG & Co.

Stoke Newington.—King's-rd., l.g. rents 68l., u.t. 48¼ yrs., g.r. 2l.	1,100

By KEMSLEY (at Romford).

Romford.—42 and 44, Queen-st., and yard adjoining, f.	690
Cotleigh-rd., plot of land, f.	220

By PEAT & HOLDSWORTH (at Redhill).

Redhill, Surrey.—13, 15, 17, and 19, Wilton rd., f., w.r. 74l. 2s.	45
Reigate, Surrey.—11 and 13, Priory-rd., and plot of land adjoining, f.	595
Lower Kingswood, Surrey.—Smithy-la., South View, and plot of land, f.	315

November 3.—By HENRY H. COLLIER & MADGE.

Fulham.—1, May-st., w.r. 36l. 8s., also l.g.r. 30l., u.t. 54 yrs., g.r. 25l.	280
3, 5, and 7, May-st., u.t. 55 yrs., g.r. 9l., w.r. 109l. 4s.	490

By GEO. HEAD & Co.

Shepherd's Bush.—90, St. Stephen's-av., f., e.r. 42l.	480
Hammersmith.—23 to 29 (odd), South-st., u.t. 14¼ yrs. g.r. 11l., w.r. 150l. 16s.	310
Regent's Park.—16, Park-rd. (s.), u.t. 10¼ yrs., g.r. 12l. 12s., y.r. 55l.	210

By STIMSON & SONS.

Chiswick.—5 and 7, Cornwall-gr., u.t. 84 yrs., g.r. 12l., w.r. 82l. 4s.	510
Tottenham.—Harringay-rd., l.g. rents 24l., reversion in 75 yrs.	130
Bethnal Green.—Rapley-pl., l.g. rents 16l., reversion in 39 yrs.	400
Southwark.—23, 24, and 26, Colnbrook-st., u.t. 19 yrs., g.r. 15l., y.r. 114l.	500

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; l.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the average prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.

	£ s. d.
Rat Stocks	1 12 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Fletton	1 8 0	Double Headers	13 7 6
Best Fareham red	3 12 0	One Side and two Ends	17 7 6
Best Red Pressed Ruabon Facing	5 0 0	Two Sides and one End	18 7 6
Best Blue Pressed Staffordshire	3 15 0	Splays & Squints	15 17 6
Do. Bullnose	4 0 0	Best Dipped Salt Glzd. Str'tch'rs	10 17 6
Best Stourbridge Fire Bricks	3 14 0	Headers	10 7 6
GLAZED BRICKS.		Quoins, Bullnose, and Flats	14 7 6
Best White and Ivory Glazed Stretchers	10 17 6	D'ble Stretchers	16 7 6
Headers	10 7 6	Double Headers	13 7 6
Quoins, Bullnose, and Flats	14 7 6	One Side and two Ends	17 7 6
D'ble Stretchers	16 7 6	Two Sides and one End	18 7 6
		Splays & Squints	15 17 6

Second Quality White and Dipped Salt Glazed, £1 5s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 6	per yard delivered.
Thames Ballast	5 0	„ „
Best Portland Cement	28 0	per ton, „
Best Ground Blue Lias Lime	19 0	„ „

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime	11s. 6d. per yard, delivered.
Stourbridge Fireclay in sacks	27s. 6d. per ton at rly. dpt.

STONE.

Per Ft. Cube. s. d.

BATH STONE—delivered on road waggons, Paddington Depôt	1 6½
Do. do. delivered on road waggons, Nine Elms Depôt	1 8½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 1
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 2½

Per Ft. Cube, Delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Red Corsehill in blocks	2 2
Beer in blocks	1 6	Closeburn Red Freestone	2 0
Greenshill in blocks	1 10	Red Mansfield Freestone	2 4
Darley Dale in blocks	2 4		

YORK STONE—Robin Hood Quarries.

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7½
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.

Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 9
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	15 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Rosemary" brand plain (per 100)	43 0
Hip and Valley (per doz.)	3 7	Best Ornamental (per 1000)	50 0
Best Broseley (per 1000)	50 0	Hip (per doz.)	4 0
Do. Ornamental (per 1000)	52 6	Valley (per doz.)	3 8
Hip and Valley (per doz.)	4 0	Best "Hartshill" brand, plain sand-faced (per 1000)	50 0
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Do. pressed (per 1000)	47 6
Do. Ornamental (per 1000)	60 0	Do. Ornamental (per 1000)	50 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6
Best Red or Mottled Staffordshire do. (Peakes) (per 1000)	51 9	Staffords. (Hanley) Reds or Brindled	42 6
Do. Ornamental do. (per 1000)	54 6	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 1	Hip (per doz.)	4 0
Valley (per doz.)	3 8	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	14 0 0	15 10 0
Deals: best 3 by 9	13 10 0	14 10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11 10 0	12 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in.
Deals: seconds	1 0 0	less than best.
Battens: seconds	0 10 0	„ „
2 in. by 4 in. and 2 in. by 6 in.	9 10 0	10 10 0
2 in. by 4½ in. and 3 in. by 5 in.	9 0 0	10 0 0
Foreign Sawn Boards—1 in. and 1¼ in. by 7 in.	0 10 0	more than battens.
¶ in.	1 0 0	„

	At per load of 50 ft.	
Fir timber: best middling Dantzig or Memel (average specification)	5 0 0	5 10 0
Seconds	4 13 0	5 0 0
Small timber (8 in. to 10 in.)	3 17 6	4 0 0
Small timber (6 in. to 8 in.)	3 5 0	3 10 0
Swedish balks	2 12 6	3 0 0
Pitch-pine timber (30 ft. average.)	4 10 0	5 5 0

JOINERS' WOOD.	At per standard.	
White Sea: first yellow deals, 3 in. by 11 in.	21 10 0	25 10 0
3 in. by 9 in.	21 10 0	23 10 0
Battens, 2½ in. and 3 in. by 7 in.	17 0 0	18 0 0
Second yellow deals, 3 in. by 11 in.	19 0 0	20 0 0
„ 3 in. by 9 in.	18 0 0	19 10 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	15 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14 0 0	15 0 0
Battens, 2½ in. and 3 in. by 7 in.	1 10 0	12 10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21 10 0	22 10 0
3 in. by 9 in.	18 10 0	19 10 0
Do. 3 in. by 9 in.	14 0 0	15 0 0
Battens		
Second yellow deals, 3 in. by 11 in.	16 10 0	17 10 0
Do. 3 in. by 9 in.	15 0 0	16 0 0
Battens	11 10 0	12 10 0
Third yellow deals, 3 in. by 11 in.	13 10 0	14 10 0
Do. 3 in. by 9 in.	13 0 0	14 0 0
Battens	10 10 0	11 0 0

WOOD (continued).

JOINERS' WOOD (continued)—	At per standard. £ s. d.	£ s. d.
White Sea and Petersburg—		
First white deals, 3 in. by 11 in.	13 0 0	14 0 0
„ „ 3 in. by 9 in.	14 0 0	14 10 0
Battens	11 10 0	12 10 0
Second white deals, 3 in. by 11 in.	14 0 0	15 0 0
„ „ 3 in. by 9 in.	13 0 0	14 0 0
Battens	10 15 0	11 0 0
Pitch-pine: deals	19 0 0	21 0 0
Under 3 in. thick extra	0 10 0	1 0 0
Yellow pine—First, regular sizes	44 0 0	upwards.
Oddments	33 0 0	„
Seconds, regular sizes	33 0 0	„
Oddments	28 0 0	„
Kauri Pine—Planks, per ft. cube	0 3 6	0 5 0
Dantzig and Stettin Oak Logs—		
Large, per ft. cube	0 3 0	0 3 9
Small „ „	0 2 6	0 2 6
Wainscot Oak Logs, per ft. cube	0 5 6	0 6 0
Dry Wainscot Oak, per ft. sup. as inch	0 0 8½	0 0 9½
1¼ in. do. do.	0 0 7	—
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0 0 10	0 1 1
Selected, Figury, per ft. super as inch	0 1 6	0 2 6
Dry Walnut, American, per ft. super. as inch	0 0 10	0 1 0
Teak, per load	18 0 0	22 0 0
American Whitewood Planks, per ft. cube	0 4 0	0 5 0

Prepared Flooring, etc.—	Per square.	
1 in. by 7 in. yellow, planed and shot	0 13 6	0 17 0
1 in. by 7 in. yellow, planed and matched	0 14 0	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 16 0	1 0 0
1 in. by 7 in. white, planed and shot	0 12 0	0 14 6
1 in. by 7 in. white, planed and matched	0 13 6	0 15 0
1¼ in. by 7 in. white, planed and matched	0 15 0	0 18 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0 11 0	0 13 6
1 in. by 7 in. „ „	0 14 0	0 18 6
¾ in. by 7 in. white „ „	0 10 0	0 11 6
1 in. by 7 in. „ „	0 12 9	0 15 0

6 in. at 4d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	7 0 0	7 10 0
Compound Girders, ordinary sections	9 0 0	10 0 0
Steel Compound Stanchions	11 0 0	12 0 0
Angles, Tees, and Channels, ordinary sections	9 0 0	10 0 0
Plitch Plates	9 0 0	9 10 0
Cast Iron Columns and Stanchions including ordinary patterns	7 10 0	8 10 0

METALS.

	Per ton, in London. £ s. d.	£ s. d.
IRON—		
Common Bars	8 10 0	9 0 0
Staffordshire Crown Bars, good merchant quality	8 15 0	9 5 0
Staffordshire "Marked Bars"	10 10 0	—
Mild Steel Bars	8 15 0	9 5 0
Hoop Iron, basis price	9 5 0	9 10 0
„ „ Galvanised	17 0 0	—
(„And upwards, according to size and gauge.)		
Sheet Iron Black—		
Ordinary sizes to 20 g.	9 15 0	—
„ „ 24 g.	10 15 0	—
„ „ 26 g.	12 5 0	—
Sheet Iron, Galvanised, flat, ordinary quality—		
Ordinary sizes, 6 ft. by 2 ft. to 8 ft. to 20 g.	15 0 0	—
Ordinary sizes to 22 g. and 24 g.	15 10 0	—
„ „ 26 g.	16 10 0	—
Sheet Iron, Galvanised, flat, best quality—		
Ordinary sizes to 20 g.	18 0 0	—
„ „ 22 g. and 24 g.	18 10 0	—
„ „ 26 g.	20 0 0	—
Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 8 ft. 20 g.	14 10 0	—
„ „ 22 g. and 24 g.	14 15 0	—
„ „ 26 g.	16 5 0	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 8 ft. to 20 g. and thicker	12 0 0	—
Best Soft Steel Sheets, 2 g. & 24 g.	13 0 0	—
„ „ „ 26 g.	15 0 0	—
Cut Nails, 3 in. to 6 in. (Under 3 in., usual trade extras.)	10 10 0	11 0 0

LEAD, &c.

	Per ton, in London. £ s. d.	£ s. d.
LEAD—Sheet, English, 4lb. and up.	16 10 0	—
Pipe in coils	17 0 0	—
Soil pipe	20 0 0	—
Compo pipe	20 0 0	—
ZINC—Sheet—	In casks of 1 cwt.	
Vielle Montagne	30 10 0	—
Silesian	30 0 0	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—		
Strong Sheet per lb.	0 1 0	—
Thin „ „	0 1 1	—
Copper nails „	0 0 10	—
Copper wire „	0 0 10	—
BRASS—		
Strong Sheet „	0 0 11	—
Thin „	0 1 0	—
TIN—English Ingots „	0 1 7	—
SOLDER—Plumbers' „	0 0 7½	—
Tinmen's „	0 0 9½	—
Blowpipe „	0 1 1	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

15 oz. thirds	2½d.	21 oz. fourths	3½.
„ fourths	1½d.	24 oz. fourths	5d.
21 oz. thirds	3½.	„ fourths	4½d.
„ fourths	2½d.	Flated Sheet, 15 oz.	3½d.
24 oz. thirds	4d.	„ 21 oz.	4½.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

Per Ft., Delivered.

⅛ Hartley's	2d.	Figured, Rolled, & 'Oceanic' Glass, white	Oxford 2½d.
¼ "	2½d.		
⅜ "	2¾d.	Ditto, tinted	3d.

OILS, &c.		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 3 11
" " in barrels	"	0 4 0
" " in drums	"	0 4 2
Boiled " in barrels	"	0 4 2
" " in drums	"	0 4 5
Turpentine in barrels	"	0 4 7
" in drums	"	0 4 9
Genuine Ground English White Lead	per ton	31 0 0
Red Lead, Dry	"	30 0 0
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 15 0

VARNISHES, &c.	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 12 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 12 0
Knotting	0 10 0
French and Brush Polish	0 10 6

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 a.m. *on Thursday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

GODMANCHESTER.—For alterations and additions to the Council Schools, for Hunts Education Committee. Mr. H. Leete, architect:—

A. Pettit	£615	T. Pearson	£558
F. Markham	610	F. Giddings	550
F. B. Thackray & Co.	598	Page & Son, Buckden*	528
Allen & Sons	570		

KING'S NORTON.—For making good part of Watford-road, for King's Norton and Northfield Urban District Council. Mr. Ambrose W. Cross, A.M.Inst.C.E., King's Heath:—

Currall, Lewis, & Martin, Ltd.	£178 2 0	J. Hunt & Sons	£167 10 0
W. Thorpe	178 1 11	J. White, jun., Boulton-road, Handsworth*	166 4 6
G. P. Trentham	168 17 6		

LONDON.—For the erection of a new aviary at Clissold Park, for the London County Council:—

D. Rowell & Co.	£225
R. Harding & Son	159
T. W. Palmer & Co., 5, Victoria-street, Westminster, S.W.*	116

[The estimate of the Chief Officer of the Parks Department, comparable with the tenders, is £150.]

LONDON.—For the execution of necessary works to put the late "Three Tuns" public-house, Billingsgate Market, into tenantable repair, etc., for the Corporation:—

N. Lidstone	£369 0 0	G. Munday & Son	£270 0 0
A. Porter	334 0 0	G. Candler & Sons	238 13 6
W. Johnson & Co.	291 0 0	A. H. Inns*	236 10 0
Kilby & Gayford	285 0 0		

LONDON.—For alterations and additions to the Chemical Laboratories, for the Corporation:—

J. J. Griffin & Co., Ltd.	£234 0	A. Gallenkamp & Co.	£198 10
		F. E. Becker & Co.*	172 0

LONDON.—For the enlargement of a London County Council technical institute (the London County Council Shoreditch Technical Institute) (Hoxton), for the London County Council:—

J. Cubitt & Co.	£12,693 0 0
W. Smith & Sons	12,338 4 6
Holloway Bros. (London), Ltd.	12,188 0 0
Leslie & Co., Ltd.	12,187 19 0
C. Wall, Ltd.	11,938 9 0
E. Lawrance & Sons, Ltd.	11,838 0 0
F. & H. F. Higgs	11,718 10 0
Kirk & Randall	11,514 10 0
J. Carmichael	11,425 0 0
W. Downs	11,104 0 0
H. L. Holloway	10,850 0 0
Patman & Fotheringham, Ltd.	10,789 0 0
J. Allen & Sons, Ltd., Kilburn*	10,491 0 0

[The Architect's estimate, comparable with the tenders, is £11,000.]

NEW HUNSTANTON.—For making-up Seagate-road, for the Urban District Council. Mr. James C. Walker, Surveyor:—

L. Leach	£314 11	R. Shanks Chatteris and Hunstanton*	£274 10
F. W. Southgate	275 0		

ORSETT.—For the supply and erection of cast-iron tank and steel tower, for the water supply of Laindon Hills Parish, for the Rural District Council. Mr. S. A. Hill-Wills, Engineer to the Council:—

Oil Engines and Pumps.

Crossley Bros., Ltd., London* £254

[Thirty tenders. Highest, £530; lowest, £173 15s.]

Cast-Iron Tank and Steel Tower.

Whessoe Foundry Co., Darlington* £230

[Forty-eight tenders. Highest, £510; lowest, £230.]

TREDEGAR.—For erecting twenty houses off Brompton-terrace, for Vale View Building Club. Mr. A. F. Webb, architect and surveyor, High-street, Blackwood, Mon.:—

	Per House.		Per House.
J. E. Taylor	£219	A. J. Colborne	£189
Spencer, Santo, & Co., Ltd.	215	T. H. Davies	189
W. Rodgers	191	T. Podden, Pengam*	174

WILLESDEN.—For road-making and paving works in Sneyd-road, Cricklewood, for the Urban District Council. Mr. O. Claude Robson, M.Inst.C.E., Engineer to the Council:—

F. G. Brummell, Dudden Hill-lane, N.W. £795

[Cornish granite to be used.]

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